



## **EPA/IDEM Requested Polychlorinated Biphenyl (PCB) Sampling**

Indianapolis Return Center  
3333 N. Franklin Rd.  
Indianapolis, IN

Prepared for:  
**Walmart**

Prepared by:  
**ENVIRON International Corporation**  
**Tampa, Florida**

Date:  
**September 26, 2014**

# Table of Contents

	Page
<b>1      Introduction</b>	<b>1</b>
<b>2      Inspection Requested Sampling Activities</b>	<b>2</b>
2.1    Sampling Strategy	2
2.2    Sampling Methods	3
2.3    Investigation Derived Waste	4
2.4    Health and Safety	4
<b>3      Sampling Results</b>	<b>5</b>
3.1    Bulk Sampling	5
3.2    Testing of Wipes from Caulk Sampling	6
<b>4      Conclusions</b>	<b>8</b>

## List of Figures

- Figure 1: Site Location Map
- Figure 2: Sample Locations
- Figure 3: Wipe and Bulk Sample Detected Result Locations

## List of Tables

- Table 1: PCB Results for EPA/IDEM Requested Materials Sampling
- Table 2: PCB Results for Wipes of Caulk Samples

## List of Appendices

- Appendix A: Tabulation of Testing Results
- Appendix B: Laboratory Analyses

## **Acronyms and Abbreviations**

ALS:	ALS Environmental
cm:	Centimeter
COC:	Chain-of Custody
ENVIRON:	Environ International Corporation
EPA:	Environmental Protection Agency
GC:	Gas Chromatography
HASP:	Health and Safety Plan
IPA:	Isopropyl alcohol
IDEM:	Indiana Department of Environmental Management
ml:	Milliliter
$\mu\text{g}/\text{m}^3$ :	Micrograms per cubic meter
$\mu\text{g}/\text{cm}^2$ :	Micrograms per square centimeter
NELAP:	National Environmental Laboratory Accreditation Program
OSHA:	Occupational Safety and Health Administration
PCB:	Polychlorinated Biphenyl
ppm:	Parts per million
TSCA:	Toxic Substances Control Act
USEPA:	United States Environmental Protection Agency

## **1 Introduction**

ENVIRON International Corporation (ENVIRON) is pleased to provide this evaluation of Polychlorinated Biphenyl (PCB) analysis results from sampling of several materials requested by USEPA and IDEM during the course of an inspection at the Indianapolis Return Center (IRC) located at 3333 North Franklin Road in Indianapolis, Indiana. The IRC is a 275,000 square foot warehouse and distribution building on a 14.8-acre parcel located in a mixed land-use area (industrial to the south and east, residential to the north and west) just east of I-465 at the intersection of North Franklin Road and East 33<sup>rd</sup> Street, Indianapolis (Figure 1).

On September 3, 2014, USEPA and IDEM conducted an inspection relating to PCB sources at the facility. The inspectors identified several materials that they considered to be possible sources of PCBs in the building and requested that sampling of these materials be conducted with analyses for PCBs. ENVIRON conducted the testing discussed below in response to the inspector's requests.

As specified by the inspectors, the objective of the sampling and analysis was to attempt to identify materials present in the building that could serve as a source of PCBs. The goal of this evaluation is to provide information about whether observed materials identified as candidate PCB-containing or PCB-related items contain PCB concentrations relevant to affecting conditions at the building.

## **2 Inspection Requested Sampling Activities**

At the completion of their observations, USEPA and IDEM inspectors discussed candidate materials they noted that could be PCB sources and identified specific items and locations in the building where they recommended testing. Their specific requests included:

- Two samples from the caulk used to seal seams in the concrete floor of the building
  - One from the floor-to-wall joint along the perimeter of the building, near the battery charging station in the northwest corner of the warehouse
  - One from the approximate center of the building, from an expansion joint in the floor
- Two samples of yellow floor paint that appeared aged
  - One from the floor near the battery charging station
  - One from a different area of the building
- Two samples of apparently aged red paint on the structural steel columns of the building
- Two samples of silver-backed insulation material present along the upper portion of the perimeter concrete block walls, each from a different wall
- Four samples of a corrugated fiberglass siding material present along the upper portion of the perimeter concrete block walls, one from each wall

In addition, the inspectors indicated their intent to return and collect samples from two marked "Used Oil" drums observed at the facility and willingness to provide split samples.

### **2.1 Sampling Strategy**

With regard to the caulk samples, the inspectors specified that part of their interest was in differentiating between PCBs that might be present in the caulk itself as opposed to accumulated dust and particulate on the surface of the caulk that would be collected with it in the course of bulk sampling. They recommended that wiping the surface of the caulk with a wet wipe prior to collecting the bulk sample would be appropriate for this particular circumstance, but that the surface should not be "pre-cleaned" using an extractive solvent. When isopropyl alcohol (instead of the standard hexane) was suggested as a wetting agent for wiping the caulk prior to sampling, the inspectors concurred that this was the type of surface particulate removal they recommended.

ENVIRON collected samples of the materials requested, generally meeting the specifications of the inspectors. Sample locations are shown on Figure 2. Field activities were completed on September 4-5, 2014.

The only specification by the inspectors not achieved was the collection of fiberglass siding samples from each of the four exterior walls. The higher portion of three of the walls could be accessed from the second-story mezzanine structure or a catwalk along the facility equipment. However, along the east wall, there was no safe means of accessing the upper portion of the wall where the siding was present with the equipment available during the field effort. Sampling

siding on this wall of the building would require construction of a scaffolding on warehouse racks or uninstalling some of the racks to allow ladder access to the wall. This was not achievable at the time given the goal of obtaining samples promptly.

In addition, while not observable during the inspection, when ENVIRON collected samples from the silver-backed insulation materials, we noted that the inner portions of the insulation differed and represented two different materials. The insulation on the west wall was a compressed fiberglass type material with a silver backing. On the south wall, the core of the material was a polyurethane foam type material behind the silver backing. Both samples were submitted for analysis. It should be noted, however, that the samples reflect two different insulation materials.

## 2.2 Sampling Methods

The bulk sampling followed the protocols developed by the Occupational Safety and Health Administration (OSHA) and USEPA. The wipes used to remove loose surficial material from the caulk prior to sampling were also analyzed and were obtained using a standardized methodology used for wipe sampling, with the substitution of isopropyl alcohol as the wetting agent.

The exposed surfaces of bulk samples other than the caulk were not wiped prior to sample collection and were collected in a manner consistent with USEPA requirements for sampling of porous, bulk materials for determining requirements related to disposal of PCB items.

ENVIRON personnel donned a clean pair of nitrile gloves for each separate bulk sample. A box cutter was used to separate several inches of caulk material from the seams where it was applied. A box cutter was also used cut segments, several square inches, from the insulation. Paint scrapers and chisels were used to scrape paint from several square inches of the painted surface. Tin snips were used to cut several square inch samples of the fiberglass siding. Samples were folded and placed in pre-cleaned 4 oz. glass jars provided by the laboratory. Tools were cleaned with distilled water and isopropyl alcohol between samples. Sample containers were labeled and packed on ice for shipment to the laboratory.

Surface wiping of the areas of caulk to be sampled was conducted using the standardized wipe methodology, which provides a quantitative estimate of surface dust and readily desorbed surface content by wiping a known surface area (100 square centimeters [ $\text{cm}^2$ ]). The surface area wiped at each caulk sampling location was 100  $\text{cm}^2$ .

ENVIRON personnel donned a clean pair of nitrile gloves for wiping the caulk and changed gloves prior to collecting the bulk caulk sample. A new cardboard template was used to define the area to be wiped. Given the narrow width of the seams (approximately 2-3 cm), the template was moved along the seam sequentially, wiping a longer segment (approximately 50 cm) of caulk than was collected, to achieve wiping over 100  $\text{cm}^2$ . A laboratory-provided gauze pad was used to wipe the caulk. The gauze was removed from its packaging and wetted with approximately 1-2 milliliters (ml) of wetting agent (isopropyl alcohol). The pad was then used to wipe the defined area surface. By visual observation, this method for wiping the caulk appeared to remove all of the loose dirt and dust from the caulk. The wipe was folded, used side in, and

placed in a pre-cleaned 30-ml glass vial provided by the laboratory. Sample containers were labeled and packed on ice for shipment to the laboratory.

The EPA/IDEM inspection team returned to the facility on September 4, 2014 to obtain samples from two drum marked "Used Oil." The inspectors conducted this sampling pursuant to their own methods and protocols and provided split samples in pre-cleaned, laboratory-provided 4 oz. glass jars to ENVIRON personnel. ENVIRON did not observe any collection methods, protocols or circumstances that would interfere with representative determinations of PCB concentration for the samples collected by the inspection team.

For quality control purposes, blank samples were collected and submitted for PCB analysis during ENVIRON's investigations on September 4-5, 2014. Three blank wipe samples were collected: 1 field blank of unwetted gauze, 1 equipment blank of gauze used to wipe a cleaned tool, and 1 equipment blank of gauze used to wipe a new 10 cm x 10 cm template. ENVIRON also submitted clean unwetted gauze as a media blank for bulk sample analysis.

Samples, including the split used oil samples, were submitted under chain-of-custody protocol to ALS Environmental (ALS) in Salt Lake City, Utah and PCB analysis for wipe samples using EPA method 8082 by Gas Chromatography (GC) was conducted at this location. ALS's Salt Lake City laboratory shipped all bulk samples to ALS Laboratories in Holland, Michigan for PCB analysis using EPA method 8082 by GC. ALS is certified under the National Environmental Laboratory Accreditation Program (NELAP).

### **2.3 Investigation Derived Waste**

Waste generated during sample collection, including waste generated by the EPA/IDEM inspection team collecting used oil samples, was contained in a 55-gallon drum. The drum was labeled, sealed, and stored onsite in the southeast corner of the building pending receipt of analytical results to evaluate disposal options.

### **2.4 Health and Safety**

All field activities were performed in accordance with a site-specific health and safety plan (HASP) developed for this Facility. The HASP was prepared in accordance with Chapter 29 Code of Federal Regulations (CFR) 1910.120 to ensure that field work implemented by the ENVIRON project team was in accordance with applicable health and safety protocols.

### 3 Sampling Results

Results from sampling the materials requested by the EPA/IDEM inspection team are summarized below and provided in the attached figures and tables.

Samples were analyzed for PCBs as Aroclor mixtures. The only Aroclor profile match reported was for Aroclor 1260 from bulk samples. All results discussed below were reported as concentrations of Aroclor 1260.

The locations of the detected PCB concentrations are shown on Figure 3.

#### 3.1 Bulk Sampling

ENVIRON collected bulk samples from caulk, paint, insulation and fiberglass siding, which were identified as candidate sources of PCBs by the inspection team. The results of analyses on the split samples from the used oil drums are also reported here.

- Concentrations of PCBs over 0.6% were found in both samples of caulk
- PCBs were detected in the paint samples, with levels in the yellow paint from 1200-2700 ppm and lower levels in the red paint, 190-250 ppm
- The silver-backed insulation differed significantly from type to type, with a concentration of 120 ppm found in the material from the west wall, but only 0.3 ppm for the sample from the south wall
- The fiberglass siding had results ranging from non-detectable to 0.24 ppm
- No PCBs were detected in the “Used Oil” samples, at reporting limits of 0.01 – 0.02 ppm

The sampled items are described in Table 1.

**Table 1: PCB Results for EPA/IDEM Requested Materials Sampling**

Sample No.	Description of Item	Aroclor 1260 mg/kg (ppm)
090414-B-072	Caulk, floor-to-wall seam, northwest corner	8000
090414-B-073	Caulk, expansion joint near sorting modules	6300
090414-B-074	Yellow floor paint (old appearance), northwest corner area	2700
090414-B-076	Yellow floor paint (old appearance), near sorting modules	1200
090414-B-075	Red paint on steel column, northwest corner area	250

090414-B-077	Red paint on steel column, center of warehouse	190
090414-B-098	Silver-backed insulation, west wall	120
090414-B-097	Silver-backed insulation, south wall (foam type)	0.3
090414-B-099	Fiberglass siding, south wall	0.24
090414-B-099	Fiberglass siding, north wall	0.13
090414-B-099	Fiberglass siding, west wall	ND (< 0.015)
090414-UO-1	"Used Oil" drum at air compressor (clear fluid)	ND (< 0.002)
090414-UO-2	"Used Oil" drum in maintenance shop (dark oil)	ND (< 0.001)

The results for the caulk, paint and "used oil" were consistent from sample to sample. The difference among results for the insulation samples is expected to reflect that they are manufactured from two different types of materials. The results for the siding samples are consistent and contain low levels of PCBs.

While fiberglass siding was not sampled from the east wall of the building due to access complexities, in light of the consistency of the results from the other three walls and the identification of caulk, paint and some of the insulation as more likely sources, further sampling of the fiberglass siding could be considered a reduced priority.

### 3.2 Testing of Wipes from Caulk Sampling

ENVIRON submitted the gauze used to wipe the caulk areas to be sampled for supplemental analyses that could provide information about the relative concentrations of PCBs in the overlying dust and particulate matter compared to the underlying caulk.

- Dust and loose particulate accumulated on the surface of the caulk contained PCB concentration of 190-210 ppm

Table 2 includes a description of results from each caulk sampling location.

**Table 2: PCB Results for Wipes of Caulk Samples**

Sample No.	Description of Item	Aroclor 1260 ( $\mu\text{g}/100\text{cm}^2$ )
090414-W-070	Wipe of caulk at floor-to-wall joint, northwest corner of warehouse	210
090414-W-071	Wipe of caulk at floor expansion joint, near sorting modules	190

## **4 Conclusions**

Sampling of several candidate PCB sources identified by the USEPA/IDEM inspection team yielded detectable PCB concentrations indicative of the potential to serve as a source to indoor conditions at the building. The concentrations of PCBs found in the caulk, paint and one type of insulation material suggest that these are sources of PCBs at the IRC. Conversely, the results for the foam type of insulation and the fiberglass siding do not suggest that these are sources of PCBs.

ENVIRON's analyses of split samples from the "Used Oil" drums collected by the inspection team did not suggest the presence of PCB-containing oils being collected at the facility.

## **Figures**



AERIAL PHOTOGRAPH OBTAINED FROM GOOGLE EARTH

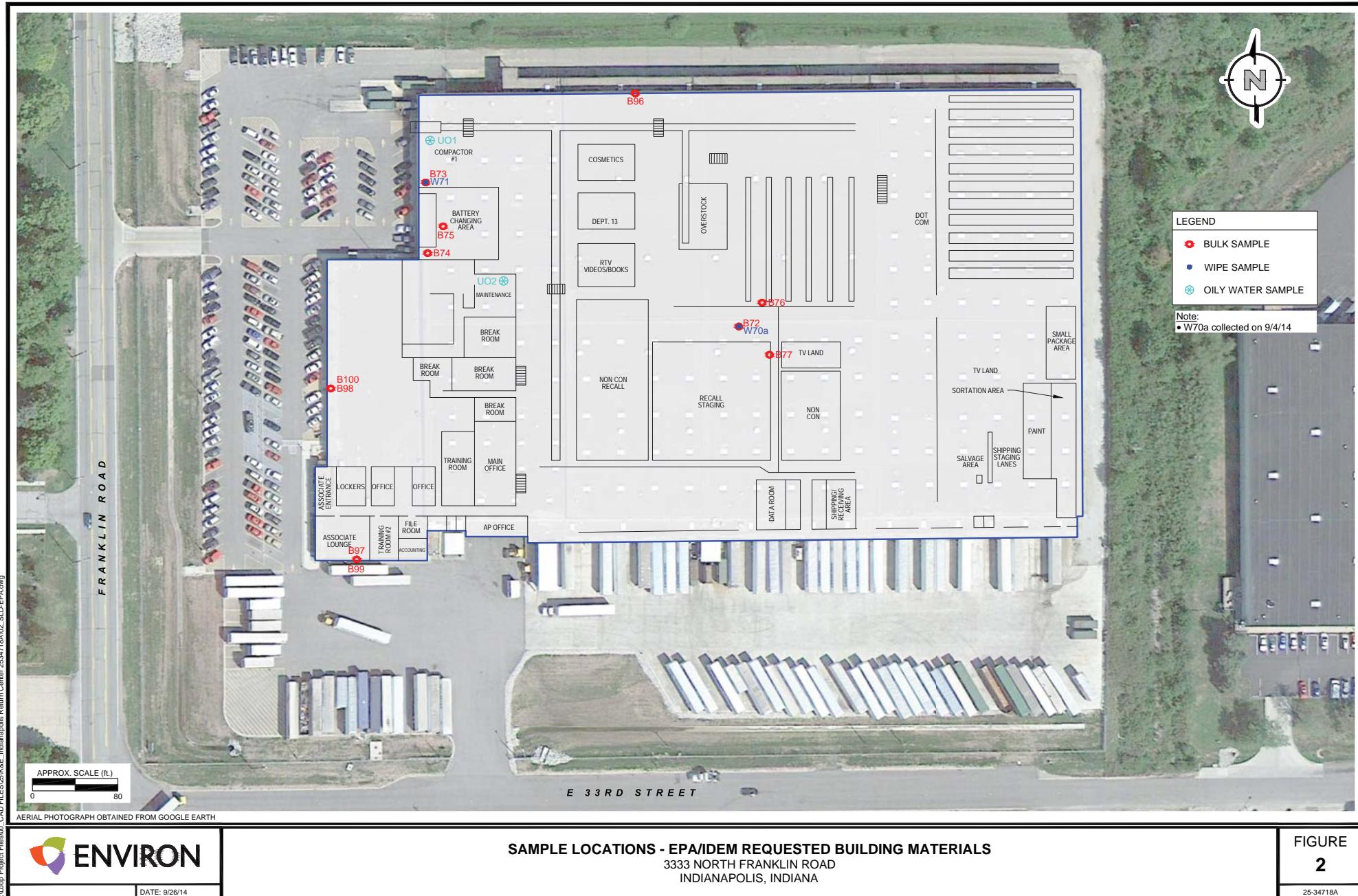


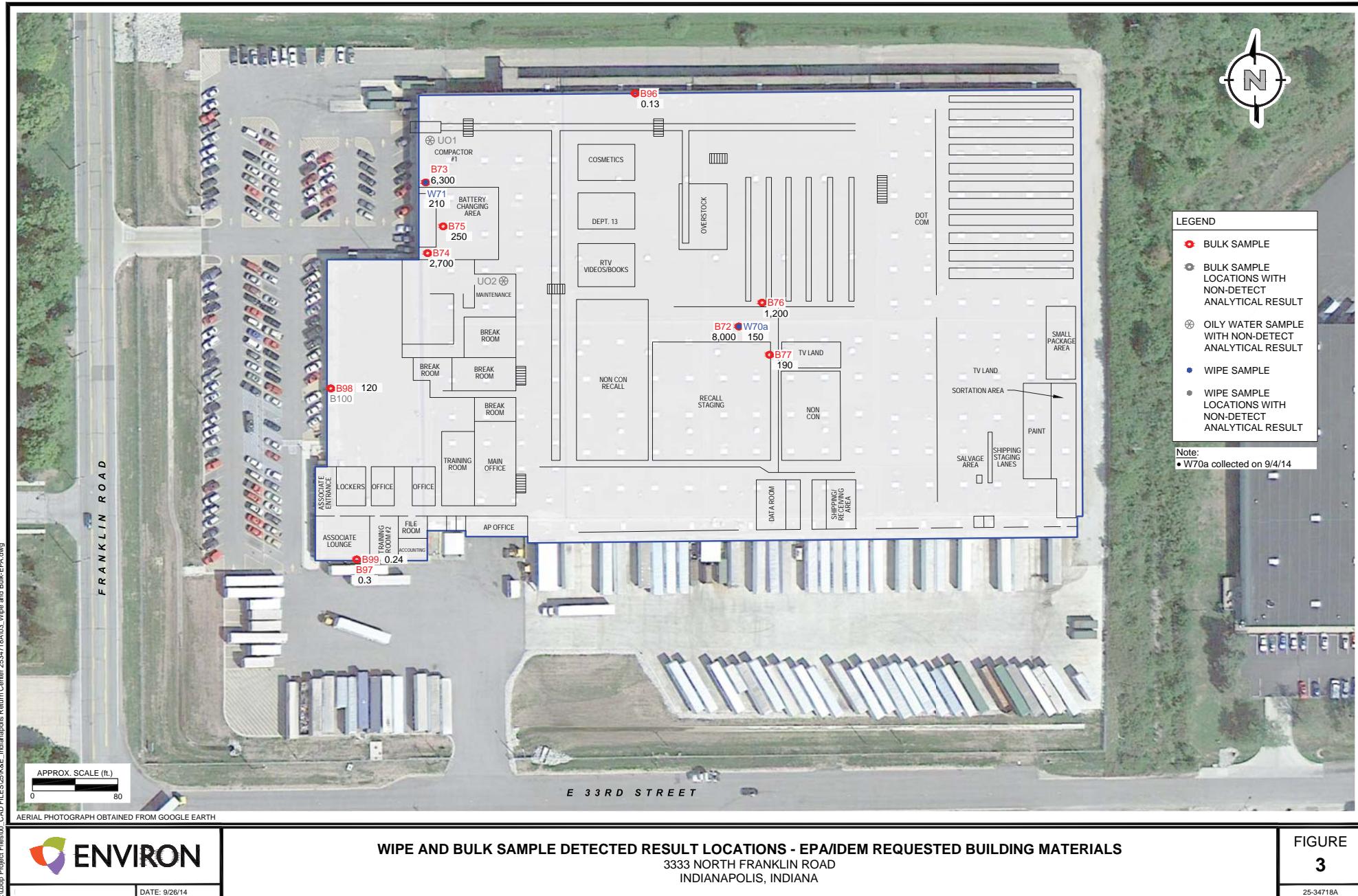
DATE: 9/26/14

**SITE LOCATION MAP**  
3333 NORTH FRANKLIN ROAD  
INDIANAPOLIS, INDIANA

**FIGURE  
1**

PROJECT





## **Appendix A**

### **Tabulation of Testing Results**

3333 North Franklin Road  
Indianapolis, Indiana

**Wipe Samples - EPA/IDEM Requested Building Materials**

Sample Number	Sample Location	Item Sampled	Analytical Result Aroclor 1260 ( $\mu\text{g}/100 \text{ cm}^2$ )	Detection Limit Aroclor 1260 ( $\mu\text{g}/100 \text{ cm}^2$ )	Notes
090414-W-030	BLANK	FIELD BLANK	ND	0.1	FIELD BLANK
090414-W-070	West of the south end of Module 6	Caulk, floor joint around structural steel footing	150	0.1	EPA/IDEM requested samples
090414-W-071	West side of facility, North of battery charging area	Caulk, floor	210	0.1	EPA/IDEM requested samples
090514-W-069	BLANK	EQUIPMENT BLANK deconned boxcutter	ND	0.1	EQUIPMENT BLANK
090514-W-070	BLANK	EQUIPMENT BLANK wetted clean gauze with hexane	ND	0.1	EQUIPMENT BLANK

**Bulk Samples - EPA/IDEM Requested Building Materials**

Sample Number	Sample Location	Item Sampled	Analytical Result Aroclor 1260 (mg/kg)	Detection Limit Aroclor 1260 (mg/kg)	Notes
090414-B-072	West of the south end of Module 6	Caulk, floor joint around structural steel footing	8,000	2.500	EPA/IDEM requested samples
090414-B-073	West side of facility, North of battery charging area	Caulk, floor	6,300	2.500	EPA/IDEM requested samples
090414-B-074	Western battery charging area, South side	Yellow paint scrapings, floor	2,700	0.100	EPA/IDEM requested samples
090414-B-075	Battery charging area, West side of facility	Red paint scrapings, structural steel column	250	0.050	EPA/IDEM requested samples
090414-B-076	Module 3, South end	Yellow paint scrapings, floor	1,200	0.500	EPA/IDEM requested samples
090414-B-077	Warehouse, Central southern area, near "TV Land" sign	Red paint scrapings, structural steel column	190	0.050	EPA/IDEM requested samples
090414-B-096	Exterior north wall	Fiberglass siding	0.13	0.100	EPA/IDEM requested samples
090414-B-097	Exterior south wall	Silver-backed insulation	0.3	0.670	EPA/IDEM requested samples
090414-B-098	Exterior west wall	Silver-backed insulation	120	0.210	EPA/IDEM requested samples
090414-B-099	Exterior south wall	Fiberglass siding	0.24	0.120	EPA/IDEM requested samples
090414-B-100	Exterior west wall	Fiberglass siding	ND	0.150	EPA/IDEM requested samples
090414-UO-1 (Used Oil-1)	Compressor area drum	Clear fluid	ND	0.020	IDEM samples from used oil drums
090414-UO-2 (Used Oil-2)	Maintenance area drum	Dark oil	ND	0.0099	IDEM samples from used oil drums
090514-B-030	Bulk Media Blank	MEDIA BLANK clean gauze	ND	0.190	MEDIA BLANK

**Appendix B**  
**Laboratory Analyses**



**ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

### Case Narrative

**Analysis:** 8082 for Aroclors

**Preparation SOP #:** OE-SW-3550

**Analysis SOP #:** OP-SW-8082

**W/O:** 1424801

**HBN:** 134335, 134334, 134371, 134390, 134394

**Client:** Environ Corporation

**Matrix:** Wipe

**General Set Information:** The field samples were received and batched for analysis.

**Method Summary:** Method 8082 was used to determine the concentrations of various Aroclors using dual capillary columns with electron capture detectors.

**Sample Preparation:** Each wipe was extracted with 10 ml hexane.

**Holding Times:** Holding time requirements were met for both sample preparation and analysis.

**Dilutions:** Samples 1424801056 (100x) and 1424801057 (100x) were reported from dilutions to get aroclor 1260 within calibration range.

### Method and Sample QC data:

*Method Blank(s):* Method analytes were not detected in the method blank at levels above 1/2 lower reporting limit.

*Surrogates:* All surrogate recoveries were within established limits.

*Laboratory Control Samples:* All recoveries were within established limits.

*Matrix Spike and Matrix Spike Duplicate:* MS and MSD were not required.

### Instrument QC:

*Initial Calibration Verification:* All initial calibration verification standards passed the percent difference criteria described in 8000B (rev. 1, Dec 1996).

*Continuing Calibration Verification:* All continuing calibration verification standards passed the percent difference criteria described in 8000B (rev. 1, Dec 1996)

**NC/CAR:** None.



**ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

**Case Narrative**

**Sample Calculation:** The Aroclors concentrations were determined by using average calibration factors and peak area. Surrogate concentrations were determined by interpolations from 2nd order regressions of standard responses (peak area) vs. concentrations. Final concentrations in ug/Wipe from the equation:

$$C_s = \frac{C_e \cdot V_e \cdot DF}{V_s}$$

where

- C<sub>s</sub> = Analyte concentration in sample (ug/Wipe)  
C<sub>e</sub> = Analyte concentration in extract (ug/mL)  
V<sub>e</sub> = Final volume of extract (mL)  
DF = Dilution Factor  
V<sub>s</sub> = Wipe sample.

**Miscellaneous Comments:** None.



---

Jessica Helland, Chemist, 09/09/2014



## ANALYTICAL REPORT

Workorder: **34-1424801**

Client: Environ Corporation

Project Manager: Paul E. Pope

### Analytical Results

Sample ID: <b>090414-W-030</b>	Sampling Site: Indianapolis, IN	Collected: 09/04/2014		
Lab ID: 1424801030	Media: Wipe	Received: 09/05/2014		
Matrix: Wipe	Sampling Parameter: Volume 100 cm <sup>2</sup>			
<b>Analysis Method - SW 8082</b>				
<b>Preparation:</b> EPA 3550, Sonic Ext, Wipe <b>Batch:</b> ENVX/19840 (HBN: 134228) <b>Prepared:</b> 09/05/2014	<b>Weight/Volume</b> <b>Initial:</b> 1 wipe <b>Final:</b> 10 mL	<b>Analysis:</b> SW 8082, Wipe <b>Batch:</b> EGC/5226 (HBN: 134334) <b>Analyzed:</b> 09/07/2014 00:00		
Analyte	ug/sample	RL (ug/sample)	Dilution	Qual.
Aroclor 1016	ND	0.10	1	
Aroclor 1260	ND	0.10	1	
Aroclor 1221	ND	0.20	1	
Aroclor 1232	ND	0.10	1	
Aroclor 1242	ND	0.10	1	
Aroclor 1248	ND	0.10	1	
Aroclor 1254	ND	0.10	1	
Aroclor 1268	ND	0.10	1	
Aroclor 1262	ND	0.10	1	
Total PCBs	ND	0.10	1	



## ANALYTICAL REPORT

Workorder: **34-1424801**

Client: Environ Corporation

Project Manager: Paul E. Pope

### Analytical Results

Sample ID: <b>090414-W-070</b>	Sampling Site: Indianapolis, IN	Collected: 09/04/2014		
Lab ID: 1424801056	Media: Wipe	Received: 09/05/2014		
Matrix: Wipe	Sampling Parameter: Volume 100 cm <sup>2</sup>			
<b>Analysis Method - SW 8082</b>				
<b>Preparation:</b> EPA 3550, Sonic Ext, Wipe <b>Batch:</b> ENVX/19846 (HBN: 134268) <b>Prepared:</b> 09/05/2014	<b>Weight/Volume</b> <b>Initial:</b> 1 wipe <b>Final:</b> 10 mL	<b>Analysis:</b> SW 8082, Wipe <b>Batch:</b> EGC/5229 (HBN: 134371) <b>Analyzed:</b> 09/07/2014 00:00		
Analyte	ug/sample	RL (ug/sample)	Dilution	Qual.
Aroclor 1016	ND	10	100	
Aroclor 1260	<b>150</b>	10	100	
Aroclor 1221	ND	20	100	
Aroclor 1232	ND	10	100	
Aroclor 1242	ND	10	100	
Aroclor 1248	ND	10	100	
Aroclor 1254	ND	10	100	
Aroclor 1268	ND	10	100	
Aroclor 1262	ND	10	100	
Total PCBs	<b>150</b>	10	100	



## ANALYTICAL REPORT

Workorder: **34-1424801**

Client: Environ Corporation

Project Manager: Paul E. Pope

### Analytical Results

Sample ID: <b>090414-W-071</b>	Sampling Site: Indianapolis, IN	Collected: 09/04/2014
Lab ID: 1424801057	Media: Wipe	Received: 09/05/2014
Matrix: Wipe	Sampling Parameter: Volume 100 cm <sup>2</sup>	

### Analysis Method - SW 8082

<b>Preparation:</b> EPA 3550, Sonic Ext, Wipe	<b>Weight/Volume</b>	<b>Analysis:</b> SW 8082, Wipe	<b>Instrument ID:</b> GCE03
<b>Batch:</b> ENVX/19846 (HBN: 134268)	<b>Initial:</b> 1 wipe	<b>Batch:</b> EGC/5229 (HBN: 134371)	<b>Percent Solid:</b> NA
<b>Prepared:</b> 09/05/2014	<b>Final:</b> 10 mL	<b>Analyzed:</b> 09/07/2014 00:00	<b>Report Basis:</b> Wet

Analyte	ug/sample	RL (ug/sample)	Dilution	Qual.
Aroclor 1016	ND	10	100	
Aroclor 1260	<b>210</b>	10	100	
Aroclor 1221	ND	20	100	
Aroclor 1232	ND	10	100	
Aroclor 1242	ND	10	100	
Aroclor 1248	ND	10	100	
Aroclor 1254	ND	10	100	
Aroclor 1268	ND	10	100	
Aroclor 1262	ND	10	100	
Total PCBs	<b>210</b>	10	100	



## ANALYTICAL REPORT

**Workorder:** **34-1424801**  
**Client:** Environ Corporation  
**Project Manager:** Paul E. Pope

### Laboratory Contact Information

ALS Environmental  
960 W Levoy Drive  
Salt Lake City, Utah 84123

Phone: (801) 266-7700  
Email: alsit.lab@ALSGlobal.com  
Web: www.alssl.com

### General Lab Comments

The results provided in this report relate only to the items tested.  
Samples were received in acceptable condition unless otherwise noted.  
Samples have not been blank corrected unless otherwise noted.  
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACCLASS (DoD ELAP)	ADE-1420	<a href="http://www.aclasscorp.com">http://www.aclasscorp.com</a>
	Utah (NELAC)	DATA1	<a href="http://health.utah.gov/lab/labimp/">http://health.utah.gov/lab/labimp/</a>
	Nevada	UT00009	<a href="http://ndep.nv.gov/bsdw/labservice.htm">http://ndep.nv.gov/bsdw/labservice.htm</a>
	Oklahoma	UT00009	<a href="http://www.deq.state.ok.us/CSDnew/">http://www.deq.state.ok.us/CSDnew/</a>
	Iowa	IA# 376	<a href="http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx">http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx</a>
	Florida (TNI)	E871067	<a href="http://www.dep.state.fl.us/labs/bars/sas/qa/">http://www.dep.state.fl.us/labs/bars/sas/qa/</a>
	Texas (TNI)	T104704456-11-1	<a href="http://www.tceq.texas.gov/field/qa/lab_accred_certif.html">http://www.tceq.texas.gov/field/qa/lab_accred_certif.html</a>
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	<a href="http://www.aihaaccreditedlabs.org">http://www.aihaaccreditedlabs.org</a>
Lead Testing: CPSC Soil, Dust, Paint ,Air	ACCLASS (ISO 17025, CPSC) AIHA (ISO 17025, AIHA ELLAP and NLLAP)	ADE-1420 101574	<a href="http://www.aclasscorp.com">http://www.aclasscorp.com</a> <a href="http://www.aihaaccreditedlabs.org">http://www.aihaaccreditedlabs.org</a>
Dietary Supplements	ACCLASS (ISO 17025)	ADE-1420	<a href="http://www.aclasscorp.com">http://www.aclasscorp.com</a>



## ANALYTICAL REPORT

Workorder: **34-1424801**

Client: Environ Corporation

Project Manager: Paul E. Pope

### Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.

RL = Reporting Limit, a verified value of method/media/instrument sensitivity.

CRDL = Contract Required Detection Limit

Reg. Limit = Regulatory Limit.

ND = Not Detected, testing result not detected above the MDL or RL.

< This testing result is less than the numerical value.

\*\* No result could be reported, see sample comments for details.

### Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.

J = Qualifier Indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.

B = Qualifier indicates that the analyte was detected in the blank.

E = Qualifier indicates that the analyte result exceeds calibration range.

P = Qualifier indicates that the RPD between the two columns is greater than 40%.



# Quality Control Sample Batch Report

## Analysis Information

**Workorder:** 1424801

**Limits:** Historical/Performance  
**Basis:** ALS Laboratory Group

**Preparation:** EPA 3550, Sonic Ext, Wipe  
**Batch:** ENVX/19840 (HBN: 134228)  
**Prepared By:** Joseph Gress

**Analysis:** SW 8082  
**Batch:** EGC/5226 (HBN: 134334)  
**Analyzed By:** Jessica Helland

## Blank

<b>MB:</b> 409883			
<b>Analyzed:</b> 09/07/2014 00:00			
<b>Units:</b> ug/sample			
<b>Analyte</b>	<b>Result</b>	<b>MDL</b>	<b>RL</b>
Aroclor 1016	ND	0.0252	0.100
Aroclor 1260	ND	0.0224	0.100
Aroclor 1221	ND	0.0304	0.200
Aroclor 1232	ND	0.0129	0.100
Aroclor 1242	ND	0.00612	0.100
Aroclor 1248	ND	0.0157	0.100
Aroclor 1254	ND	0.0113	0.100
Aroclor 1268	ND	NA	0.100
Aroclor 1262	ND	NA	0.100

## Laboratory Control Sample - Laboratory Control Sample Duplicate

<b>LCS:</b> 409884						<b>LCSD:</b> 409885					
<b>Analyzed:</b> 09/07/2014 00:00						<b>Analyzed:</b> 09/07/2014 00:00					
<b>Dilution:</b> 1						<b>Dilution:</b> 1					
<b>Units:</b> ug/sample						<b>Units:</b> ug/sample					
<b>Analyte</b>	<b>Result</b>	<b>Target</b>	<b>% Rec</b>	<b>QC Limits</b>		<b>Result</b>	<b>% Rec</b>	<b>RPD</b>	<b>QC Limits</b>		
Aroclor 1221	4.55	5.00	91.0	75.0	125.0	4.40	88.1	3.30	0.0	35.0	
Aroclor 1232	4.77	5.00	95.3	75.0	125.0	4.78	95.6	0.316	0.0	35.0	
Aroclor 1016	5.29	5.00	106	75.0	129.3	5.28	106	0.131	0.0	35.0	
Aroclor 1242	4.93	5.00	98.6	75.0	125.0	4.97	99.5	0.876	0.0	35.0	
Aroclor 1248	5.01	5.00	100	75.0	125.0	4.98	99.5	0.651	0.0	35.0	
Aroclor 1254	5.25	5.00	105	75.0	125.0	5.20	104	1.05	0.0	35.0	
Aroclor 1260	5.09	5.00	102	67.7	129.9	5.03	101	1.24	0.0	35.0	
Aroclor 1262	5.10	5.00	102	75.0	125.0	5.07	101	0.647	0.0	35.0	
Aroclor 1268	6.22	5.00	124	75.0	125.0	6.24	125	0.376	0.0	35.0	

## Surrogate Recoveries

<b>Surrogate</b>	Tetrachloro-m-xylene		
<b>QC Limits</b>	55.8      153.9		
<b>Units</b>	ug/sample		
<b>Lab ID</b>	<b>Result</b>	<b>Target</b>	<b>% Recovery</b>
1424801028	0.517	0.500	103
1424801023	0.526	0.500	105
1424801027	0.530	0.500	106
409885-LCSD	0.549	0.500	110
1424801038	0.520	0.500	104
1424801029	0.523	0.500	105
1424801033	0.521	0.500	104



# Quality Control Sample Batch Report

## Analysis Information

Workorder: 1424801

Limits: Historical/Performance  
Basis: ALS Laboratory Group

Preparation: EPA 3550, Sonic Ext, Wipe  
Batch: ENVX/19840 (HBN: 134228)  
Prepared By: Joseph Gress

Analysis: SW 8082  
Batch: EGC/5226 (HBN: 134334)  
Analyzed By: Jessica Helland

## Surrogate Recoveries

Surrogate	Tetrachloro-m-xylene		
QC Limits	55.8	153.9	
Units	ug/sample		
Lab ID	Result	Target	% Recovery
1424801030	0.530	0.500	106
1424801037	0.523	0.500	105
1424801034	0.526	0.500	105
1424801040	0.542	0.500	108
1424801024	0.517	0.500	104
409884-LCS	0.546	0.500	109
1424801039	0.518	0.500	104
409883-MB	0.536	0.500	107
1424801021	0.521	0.500	104
1424801035	0.520	0.500	104
1424801036	0.515	0.500	103
1424801026	0.519	0.500	104
1424801022	0.523	0.500	105
1424801031	0.505	0.500	101
1424801032	0.524	0.500	105
1424801025	0.517	0.500	103



# Quality Control Sample Batch Report

## Analysis Information

**Workorder:** 1424801

**Limits:** Historical/Performance  
**Basis:** ALS Laboratory Group

**Preparation:** EPA 3550, Sonic Ext, Wipe  
**Batch:** ENVX/19840 (HBN: 134228)  
**Prepared By:** Joseph Gress

**Analysis:** SW 8082  
**Batch:** EGC/5226 (HBN: 134334)  
**Analyzed By:** Jessica Helland

## QC Data Approved and Reviewed by

Jessica Helland

Analyst

Mila V. Potekhin

Peer Review

9/8/2014

Date

## Symbols and Definitions

- \* - Analyte above reporting limit or outside of control limits
- ▲ - Sample result is greater than 4 times the spike added
- - Sample and Matrix Duplicate less than 5 times the reporting limit

RPD - Relative % Difference (Spike / Spike Duplicate)  
ND - Not Detected (U - Qualifier also flags analyte as not detected)  
NA - Not Applicable  
QC results are not adjusted for moisture correction, where applicable



# Quality Control Sample Batch Report

## Analysis Information

**Workorder:** 1424801

**Limits:** Historical/Performance  
**Basis:** ALS Laboratory Group

**Preparation:** EPA 3550, Sonic Ext, Wipe  
**Batch:** ENVX/19839 (HBN: 134218)  
**Prepared By:** Joseph Gress

**Analysis:** SW 8082  
**Batch:** EGC/5227 (HBN: 134335)  
**Analyzed By:** Jessica Helland

## Blank

<b>MB:</b> 409842			
<b>Analyzed:</b> 09/07/2014 00:00			
<b>Units:</b> ug/sample			
Analyte	Result	MDL	RL
Aroclor 1016	ND	0.0252	0.100
Aroclor 1260	ND	0.0224	0.100
Aroclor 1221	ND	0.0304	0.200
Aroclor 1232	ND	0.0129	0.100
Aroclor 1242	ND	0.00612	0.100
Aroclor 1248	ND	0.0157	0.100
Aroclor 1254	ND	0.0113	0.100
Aroclor 1268	ND	NA	0.100
Aroclor 1262	ND	NA	0.100

## Laboratory Control Sample - Laboratory Control Sample Duplicate

<b>LCS:</b> 409843	<b>LCSD:</b> 409844									
<b>Analyzed:</b> 09/07/2014 00:00	<b>Analyzed:</b> 09/07/2014 00:00									
<b>Dilution:</b> 1	<b>Dilution:</b> 1									
<b>Units:</b> ug/sample	<b>Units:</b> ug/sample									
Analyte	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
Aroclor 1221	4.18	5.00	83.7	75.0	125.0	4.32	86.4	3.19	0.0	35.0
Aroclor 1232	4.59	5.00	91.9	75.0	125.0	4.66	93.3	1.52	0.0	35.0
Aroclor 1016	4.97	5.00	99.5	75.0	129.3	5.18	104	4.00	0.0	35.0
Aroclor 1242	4.72	5.00	94.5	75.0	125.0	4.82	96.4	2.08	0.0	35.0
Aroclor 1248	4.72	5.00	94.4	75.0	125.0	4.86	97.3	3.03	0.0	35.0
Aroclor 1254	4.95	5.00	98.9	75.0	125.0	5.15	103	3.95	0.0	35.0
Aroclor 1260	4.80	5.00	96.0	67.7	129.9	5.05	101	5.04	0.0	35.0
Aroclor 1262	4.90	5.00	97.9	75.0	125.0	5.05	101	3.11	0.0	35.0
Aroclor 1268	6.05	5.00	121	75.0	125.0	5.65	113	6.78	0.0	35.0

## Surrogate Recoveries

Surrogate	Tetrachloro-m-xylene		
QC Limits	55.8	153.9	
Units	ug/sample		
Lab ID	Result	Target	% Recovery
1424801015	0.527	0.500	105
1424801017	0.532	0.500	106
1424801016	0.529	0.500	106
1424801008	0.532	0.500	106
1424801019	0.524	0.500	105
409842-MB	0.525	0.500	105
1424801006	0.535	0.500	107



# Quality Control Sample Batch Report

## Analysis Information

Workorder: 1424801

Limits: Historical/Performance  
Basis: ALS Laboratory Group

Preparation: EPA 3550, Sonic Ext, Wipe  
Batch: ENVX/19839 (HBN: 134218)  
Prepared By: Joseph Gress

Analysis: SW 8082  
Batch: EGC/5227 (HBN: 134335)  
Analyzed By: Jessica Helland

## Surrogate Recoveries

Surrogate	Tetrachloro-m-xylene		
QC Limits	55.8	153.9	
Units	ug/sample		
Lab ID	Result	Target	% Recovery
1424801005	0.521	0.500	104
409844-LCSD	0.537	0.500	107
1424801003	0.526	0.500	105
1424801014	0.551	0.500	110
1424801012	0.522	0.500	104
1424801018	0.524	0.500	105
1424801009	0.517	0.500	103
1424801011	0.513	0.500	103
409843-LCS	0.535	0.500	107
1424801013	0.504	0.500	101
1424801007	0.518	0.500	104
1424801001	0.521	0.500	104
1424801002	0.527	0.500	105
1424801020	0.521	0.500	104
1424801004	0.517	0.500	103
1424801010	0.522	0.500	105



# Quality Control Sample Batch Report

## Analysis Information

**Workorder:** 1424801

**Limits:** Historical/Performance  
**Basis:** ALS Laboratory Group

**Preparation:** EPA 3550, Sonic Ext, Wipe  
**Batch:** ENVX/19839 (HBN: 134218)  
**Prepared By:** Joseph Gress

**Analysis:** SW 8082  
**Batch:** EGC/5227 (HBN: 134335)  
**Analyzed By:** Jessica Helland

## QC Data Approved and Reviewed by

Jessica Helland  
Analyst

Mila V. Potekhin  
Peer Review

9/8/2014  
Date

## Symbols and Definitions

- \* - Analyte above reporting limit or outside of control limits
- ▲ - Sample result is greater than 4 times the spike added
- - Sample and Matrix Duplicate less than 5 times the reporting limit

RPD - Relative % Difference (Spike / Spike Duplicate)  
ND - Not Detected (U - Qualifier also flags analyte as not detected)  
NA - Not Applicable  
QC results are not adjusted for moisture correction, where applicable



# Quality Control Sample Batch Report

## Analysis Information

**Workorder:** 1424801

**Limits:** Historical/Performance  
**Basis:** ALS Laboratory Group

**Preparation:** EPA 3550, Sonic Ext, Wipe  
**Batch:** ENVX/19846 (HBN: 134268)  
**Prepared By:** Joseph Gress

**Analysis:** SW 8082  
**Batch:** EGC/5229 (HBN: 134371)  
**Analyzed By:** Jessica Helland

## Blank

<b>MB:</b> 409968			
<b>Analyzed:</b> 09/07/2014 00:00			
<b>Units:</b> ug/sample			
<b>Analyte</b>	<b>Result</b>	<b>MDL</b>	<b>RL</b>
Aroclor 1016	ND	0.0252	0.100
Aroclor 1260	ND	0.0224	0.100
Aroclor 1221	ND	0.0304	0.200
Aroclor 1232	ND	0.0129	0.100
Aroclor 1242	ND	0.00612	0.100
Aroclor 1248	ND	0.0157	0.100
Aroclor 1254	ND	0.0113	0.100
Aroclor 1268	ND	NA	0.100
Aroclor 1262	ND	NA	0.100

## Laboratory Control Sample - Laboratory Control Sample Duplicate

<b>LCS:</b> 409969						<b>LCSD:</b> 409970					
<b>Analyzed:</b> 09/07/2014 00:00						<b>Analyzed:</b> 09/07/2014 00:00					
<b>Dilution:</b> 1						<b>Dilution:</b> 1					
<b>Units:</b> ug/sample						<b>Units:</b> ug/sample					
<b>Analyte</b>	<b>Result</b>	<b>Target</b>	<b>% Rec</b>	<b>QC Limits</b>		<b>Result</b>	<b>% Rec</b>	<b>RPD</b>	<b>QC Limits</b>		
Aroclor 1221	4.43	5.00	88.7	75.0	125.0	4.40	88.0	0.731	0.0	35.0	
Aroclor 1232	4.59	5.00	91.8	75.0	125.0	4.57	91.4	0.410	0.0	35.0	
Aroclor 1016	5.00	5.00	100	75.0	129.3	4.99	99.7	0.226	0.0	35.0	
Aroclor 1242	4.73	5.00	94.6	75.0	125.0	4.74	94.9	0.304	0.0	35.0	
Aroclor 1248	4.74	5.00	94.8	75.0	125.0	4.69	93.9	0.950	0.0	35.0	
Aroclor 1254	4.86	5.00	97.3	75.0	125.0	4.81	96.3	1.04	0.0	35.0	
Aroclor 1260	4.77	5.00	95.5	67.7	129.9	4.74	94.8	0.683	0.0	35.0	
Aroclor 1262	4.90	5.00	98.0	75.0	125.0	4.74	94.7	3.38	0.0	35.0	
Aroclor 1268	5.78	5.00	116	75.0	125.0	5.80	116	0.221	0.0	35.0	

## Surrogate Recoveries

<b>Surrogate</b>	Tetrachloro-m-xylene		
<b>QC Limits</b>	55.8	153.9	
<b>Units</b>	ug/sample		
<b>Lab ID</b>	<b>Result</b>	<b>Target</b>	<b>% Recovery</b>
1424801059	0.525	0.500	105
1424801048	0.515	0.500	103
1424801046	0.513	0.500	103
1424801058	0.496	0.500	99.1
409970-LCSD	0.530	0.500	106
1424801049	0.517	0.500	103
1424801052	0.522	0.500	104



# Quality Control Sample Batch Report

## Analysis Information

Workorder: 1424801

Limits: Historical/Performance  
Basis: ALS Laboratory Group

Preparation: EPA 3550, Sonic Ext, Wipe  
Batch: ENVX/19846 (HBN: 134268)  
Prepared By: Joseph Gress

Analysis: SW 8082  
Batch: EGC/5229 (HBN: 134371)  
Analyzed By: Jessica Helland

## Surrogate Recoveries

Surrogate	Tetrachloro-m-xylene		
QC Limits	55.8	153.9	
Units	ug/sample		
Lab ID	Result	Target	% Recovery
1424801054	0.523	0.500	105
1424801060	0.524	0.500	105
1424801056	0.499	0.500	99.9
1424801042	0.509	0.500	102
1424801047	0.511	0.500	102
1424801050	0.529	0.500	106
1424801057	0.515	0.500	103
1424801041	0.512	0.500	102
1424801051	0.532	0.500	106
1424801044	0.508	0.500	102
409969-LCS	0.535	0.500	107
1424801055	0.518	0.500	104
1424801043	0.515	0.500	103
1424801053	0.524	0.500	105
1424801045	0.514	0.500	103
409968-MB	0.522	0.500	104



# Quality Control Sample Batch Report

## Analysis Information

**Workorder:** 1424801

**Limits:** Historical/Performance  
**Basis:** ALS Laboratory Group

**Preparation:** EPA 3550, Sonic Ext, Wipe  
**Batch:** ENVX/19846 (HBN: 134268)  
**Prepared By:** Joseph Gress

**Analysis:** SW 8082  
**Batch:** EGC/5229 (HBN: 134371)  
**Analyzed By:** Jessica Helland

## QC Data Approved and Reviewed by

Jessica Helland  
Analyst

Mila V. Potekhin  
Peer Review

9/8/2014  
Date

## Symbols and Definitions

- \* - Analyte above reporting limit or outside of control limits
- ▲ - Sample result is greater than 4 times the spike added
- - Sample and Matrix Duplicate less than 5 times the reporting limit

RPD - Relative % Difference (Spike / Spike Duplicate)  
ND - Not Detected (U - Qualifier also flags analyte as not detected)  
NA - Not Applicable  
QC results are not adjusted for moisture correction, where applicable



# Quality Control Sample Batch Report

## Analysis Information

**Workorder:** 1424801

**Limits:** Historical/Performance  
**Basis:** ALS Laboratory Group

**Preparation:** EPA 3550, Sonic Ext, Wipe  
**Batch:** ENVX/19847 (HBN: 134270)  
**Prepared By:** Joseph Gress

**Analysis:** SW 8082  
**Batch:** EGC/5231 (HBN: 134390)  
**Analyzed By:** Jessica Helland

## Blank

<b>MB:</b> 409974			
<b>Analyzed:</b> 09/08/2014 00:00			
<b>Units:</b> ug/sample			
<b>Analyte</b>	<b>Result</b>	<b>MDL</b>	<b>RL</b>
Aroclor 1016	ND	0.0252	0.100
Aroclor 1260	ND	0.0224	0.100
Aroclor 1221	ND	0.0304	0.200
Aroclor 1232	ND	0.0129	0.100
Aroclor 1242	ND	0.00612	0.100
Aroclor 1248	ND	0.0157	0.100
Aroclor 1254	ND	0.0113	0.100
Aroclor 1268	ND	NA	0.100
Aroclor 1262	ND	NA	0.100

## Laboratory Control Sample - Laboratory Control Sample Duplicate

<b>LCS:</b> 409975						<b>LCSD:</b> 409976					
<b>Analyzed:</b> 09/08/2014 00:00						<b>Analyzed:</b> 09/08/2014 00:00					
<b>Dilution:</b> 1						<b>Dilution:</b> 1					
<b>Units:</b> ug/sample						<b>Units:</b> ug/sample					
<b>Analyte</b>	<b>Result</b>	<b>Target</b>	<b>% Rec</b>	<b>QC Limits</b>		<b>Result</b>	<b>% Rec</b>	<b>RPD</b>	<b>QC Limits</b>		
Aroclor 1221	4.51	5.00	90.2	75.0	125.0	4.54	90.7	0.524	0.0	35.0	
Aroclor 1232	4.37	5.00	87.5	75.0	125.0	4.43	88.5	1.17	0.0	35.0	
Aroclor 1016	4.95	5.00	99.0	75.0	129.3	4.96	99.3	0.272	0.0	35.0	
Aroclor 1242	4.73	5.00	94.6	75.0	125.0	4.83	96.6	2.06	0.0	35.0	
Aroclor 1248	4.59	5.00	91.8	75.0	125.0	4.64	92.7	0.997	0.0	35.0	
Aroclor 1254	4.49	5.00	89.7	75.0	125.0	4.57	91.4	1.84	0.0	35.0	
Aroclor 1260	4.51	5.00	90.1	67.7	129.9	4.63	92.6	2.67	0.0	35.0	
Aroclor 1262	4.29	5.00	85.8	75.0	125.0	4.42	88.4	2.96	0.0	35.0	
Aroclor 1268	4.87	5.00	97.3	75.0	125.0	5.01	100	2.82	0.0	35.0	

## Surrogate Recoveries

<b>Surrogate</b>	Tetrachloro-m-xylene		
<b>QC Limits</b>	55.8      153.9		
<b>Units</b>	ug/sample		
<b>Lab ID</b>	<b>Result</b>	<b>Target</b>	<b>% Recovery</b>
1424801069	0.524	0.500	105
1424801064	0.535	0.500	107
1424801065	0.528	0.500	106
1424801066	0.511	0.500	102
1424801068	0.508	0.500	102
1424801075	0.514	0.500	103
409975-LCS	0.537	0.500	107



# Quality Control Sample Batch Report

## Analysis Information

Workorder: 1424801

Limits: Historical/Performance  
Basis: ALS Laboratory Group

Preparation: EPA 3550, Sonic Ext, Wipe  
Batch: ENVX/19847 (HBN: 134270)  
Prepared By: Joseph Gress

Analysis: SW 8082  
Batch: EGC/5231 (HBN: 134390)  
Analyzed By: Jessica Helland

## Surrogate Recoveries

Surrogate	Tetrachloro-m-xylene		
QC Limits	55.8	153.9	
Units	ug/sample		
Lab ID	Result	Target	% Recovery
1424801079	0.527	0.500	105
1424801061	0.503	0.500	101
1424801063	0.531	0.500	106
1424801078	0.529	0.500	106
1424801071	0.516	0.500	103
409974-MB	0.530	0.500	106
1424801074	0.527	0.500	105
1424801062	0.524	0.500	105
1424801076	0.513	0.500	103
1424801080	0.504	0.500	101
1424801070	0.498	0.500	99.7
1424801073	0.503	0.500	101
409976-LCSD	0.543	0.500	109
1424801072	0.510	0.500	102
1424801077	0.506	0.500	101
1424801067	0.517	0.500	103



# Quality Control Sample Batch Report

## Analysis Information

**Workorder:** 1424801

**Limits:** Historical/Performance  
**Basis:** ALS Laboratory Group

**Preparation:** EPA 3550, Sonic Ext, Wipe  
**Batch:** ENVX/19847 (HBN: 134270)  
**Prepared By:** Joseph Gress

**Analysis:** SW 8082  
**Batch:** EGC/5231 (HBN: 134390)  
**Analyzed By:** Jessica Helland

## QC Data Approved and Reviewed by

Jessica Helland  
Analyst

Mila V. Potekhin  
Peer Review

9/9/2014  
Date

## Symbols and Definitions

- \* - Analyte above reporting limit or outside of control limits
- ▲ - Sample result is greater than 4 times the spike added
- - Sample and Matrix Duplicate less than 5 times the reporting limit

RPD - Relative % Difference (Spike / Spike Duplicate)  
ND - Not Detected (U - Qualifier also flags analyte as not detected)  
NA - Not Applicable  
QC results are not adjusted for moisture correction, where applicable



# Quality Control Sample Batch Report

## Analysis Information

**Workorder:** 1424801

**Limits:** Historical/Performance  
**Basis:** ALS Laboratory Group

**Preparation:** EPA 3550, Sonic Ext, Wipe  
**Batch:** ENVX/19848 (HBN: 134271)  
**Prepared By:** Joseph Gress

**Analysis:** SW 8082  
**Batch:** EGC/5232 (HBN: 134394)  
**Analyzed By:** Jessica Helland

## Blank

<b>MB:</b> 409977			
<b>Analyzed:</b> 09/08/2014 00:00			
<b>Units:</b> ug/sample			
<b>Analyte</b>	<b>Result</b>	<b>MDL</b>	<b>RL</b>
Aroclor 1016	ND	0.0252	0.100
Aroclor 1260	ND	0.0224	0.100
Aroclor 1221	ND	0.0304	0.200
Aroclor 1232	ND	0.0129	0.100
Aroclor 1242	ND	0.00612	0.100
Aroclor 1248	ND	0.0157	0.100
Aroclor 1254	ND	0.0113	0.100
Aroclor 1268	ND	NA	0.100
Aroclor 1262	ND	NA	0.100

## Laboratory Control Sample - Laboratory Control Sample Duplicate

<b>LCS:</b> 409978						<b>LCSD:</b> 409979					
<b>Analyzed:</b> 09/08/2014 00:00						<b>Analyzed:</b> 09/08/2014 00:00					
<b>Dilution:</b> 1						<b>Dilution:</b> 1					
<b>Units:</b> ug/sample						<b>Units:</b> ug/sample					
<b>Analyte</b>	<b>Result</b>	<b>Target</b>	<b>% Rec</b>	<b>QC Limits</b>		<b>Result</b>	<b>% Rec</b>	<b>RPD</b>	<b>QC Limits</b>		
Aroclor 1221	4.68	5.00	93.6	75.0	125.0	4.65	93.0	0.624	0.0	35.0	
Aroclor 1232	4.36	5.00	87.2	75.0	125.0	4.32	86.3	1.05	0.0	35.0	
Aroclor 1016	4.84	5.00	96.8	75.0	129.3	4.78	95.7	1.17	0.0	35.0	
Aroclor 1242	4.74	5.00	94.8	75.0	125.0	4.74	94.7	0.0865	0.0	35.0	
Aroclor 1248	4.63	5.00	92.6	75.0	125.0	4.60	92.0	0.563	0.0	35.0	
Aroclor 1254	4.55	5.00	91.1	75.0	125.0	4.51	90.3	0.849	0.0	35.0	
Aroclor 1260	4.58	5.00	91.6	67.7	129.9	4.53	90.6	1.12	0.0	35.0	
Aroclor 1262	4.51	5.00	90.3	75.0	125.0	4.42	88.5	2.02	0.0	35.0	
Aroclor 1268	5.15	5.00	103	75.0	125.0	5.18	104	0.614	0.0	35.0	

## Surrogate Recoveries

<b>Surrogate</b>	Tetrachloro-m-xylene		
<b>QC Limits</b>	55.8      153.9		
<b>Units</b>	ug/sample		
<b>Lab ID</b>	<b>Result</b>	<b>Target</b>	<b>% Recovery</b>
1424801085	0.531	0.500	106
409978-LCS	0.541	0.500	108
1424801082	0.526	0.500	105
1424801084	0.521	0.500	104
1424801081	0.518	0.500	104
1424801086	0.516	0.500	103
409977-MB	0.535	0.500	107



# Quality Control Sample Batch Report

## Analysis Information

Workorder: 1424801

Limits: Historical/Performance  
Basis: ALS Laboratory Group

Preparation: EPA 3550, Sonic Ext, Wipe  
Batch: ENVX/19848 (HBN: 134271)  
Prepared By: Joseph Gress

Analysis: SW 8082  
Batch: EGC/5232 (HBN: 134394)  
Analyzed By: Jessica Helland

## Surrogate Recoveries

Surrogate	Tetrachloro-m-xylene		
QC Limits	55.8	153.9	
Units	ug/sample		
Lab ID	Result	Target	% Recovery
1424801083	0.506	0.500	101
409979-LCSD	0.544	0.500	109



# Quality Control Sample Batch Report

## Analysis Information

**Workorder:** 1424801

**Limits:** Historical/Performance  
**Basis:** ALS Laboratory Group

**Preparation:** EPA 3550, Sonic Ext, Wipe  
**Batch:** ENVX/19848 (HBN: 134271)  
**Prepared By:** Joseph Gress

**Analysis:** SW 8082  
**Batch:** EGC/5232 (HBN: 134394)  
**Analyzed By:** Jessica Helland

## QC Data Approved and Reviewed by

Jessica Helland  
Analyst

Mila V. Potekhin  
Peer Review

9/9/2014  
Date

## Symbols and Definitions

- \* - Analyte above reporting limit or outside of control limits
- ▲ - Sample result is greater than 4 times the spike added
- - Sample and Matrix Duplicate less than 5 times the reporting limit

RPD - Relative % Difference (Spike / Spike Duplicate)  
ND - Not Detected (U - Qualifier also flags analyte as not detected)  
NA - Not Applicable  
QC results are not adjusted for moisture correction, where applicable



**ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

### Case Narrative

**Analysis:** 8082 for Aroclors

**Preparation SOP #:** OE-SW-3550

**Analysis SOP #:** OP-SW-8082

**W/O:** 1425222

**HBN:** 134548

**General Set Information:** The field samples were received and batched for analysis.

**Method Summary:** Method 8082 was used to determine the concentrations of various Aroclors using dual capillary columns with electron capture detectors.

**Sample Preparation:** Each wipe was extracted with 10 ml hexane.

**Holding Times:** Holding time requirements were met for both sample preparation and analysis.

**Dilutions:** no dilutions were required.

#### **Method and Sample QC data:**

*Method Blank(s):* Method analytes were not detected in the method blank at levels above 1/2 lower reporting limit.

*Surrogates:* All surrogate recoveries were within established limits.

*Laboratory Control Samples:* Aroclor 1232 failed low on both the LCS and LCSD. NC/CAR 0836 was initiated.

*Matrix Spike and Matrix Spike Duplicate:* MS and MSD were not required.

#### **Instrument QC:**

*Initial Calibration Verification:* All initial calibration verification standards passed the percent difference criteria described in 8000B (rev. 1, Dec 1996).

*Continuing Calibration Verification:* All continuing calibration verification standards passed the percent difference criteria described in 8000B (rev. 1, Dec 1996)

**NC/CAR:** 0836



**ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

### Case Narrative

**Sample Calculation:** The Aroclors concentrations were determined by using average calibration factors and peak area. Surrogate concentrations were determined by

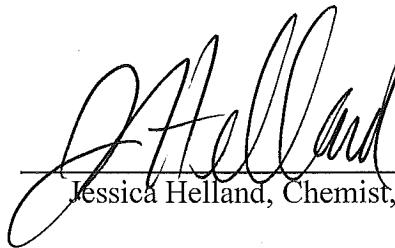
- ↳ interpolations from 2nd order regressions of standard responses (peak area) vs. concentrations. Final concentrations in ug/Wipe from the equation:

$$C_s = \frac{C_e \cdot V_e \cdot DF}{V_s}$$

where

$C_s$	=	Analyte concentration in sample (ug/Wipe)
$C_e$	=	Analyte concentration in extract (ug/mL)
$V_e$	=	Final volume of extract (mL)
$DF$	=	Dilution Factor
$V_s$	=	Wipe sample.

**Miscellaneous Comments:** None.



---

Jessica Helland, Chemist, 09/10/2014



# ANALYTICAL REPORT

Workorder: **34-1425222**

Client: Environ Corporation

Project Manager: Paul E. Pope

## Analytical Results

Sample ID: <b>090514-W-069</b>	Sampling Site: Indianapolis, IN	Collected: 09/05/2014
Lab ID: 1425222015	Media: Wipe	Received: 09/06/2014
Matrix: Wipe	Sampling Parameter: Volume 100 cm <sup>2</sup>	

### Analysis Method - SW 8082

Preparation: EPA 3550, Sonic Ext, Wipe	<u>Weight/Volume</u>	Analysis: SW 8082, Wipe	Instrument ID: GCE30
Batch: ENVX/19866 (HBN: 134426)	Initial: 1 wipe	Batch: EGC/5239 (HBN: 134548)	Percent Solid: NA
Prepared: 09/09/2014	Final: 10 mL	Analyzed: 09/09/2014 00:00	Report Basis: Wet

Analyte	ug/sample	RL (ug/sample)	Dilution	Qual.
Aroclor 1016	ND	0.10	1	
Aroclor 1260	ND	0.10	1	
Aroclor 1221	ND	0.20	1	
Aroclor 1232	ND	0.10	1	
Aroclor 1242	ND	0.10	1	
Aroclor 1248	ND	0.10	1	
Aroclor 1254	ND	0.10	1	
Aroclor 1268	ND	0.10	1	
Aroclor 1262	ND	0.10	1	
Total PCBs	ND	0.10	1	

Sample ID: <b>090514-W-070</b>	Sampling Site: Indianapolis, IN	Collected: 09/05/2014
Lab ID: 1425222016	Media: Wipe	Received: 09/06/2014
Matrix: Wipe	Sampling Parameter: Volume 100 cm <sup>2</sup>	

### Analysis Method - SW 8082

Preparation: EPA 3550, Sonic Ext, Wipe	<u>Weight/Volume</u>	Analysis: SW 8082, Wipe	Instrument ID: GCE30
Batch: ENVX/19866 (HBN: 134426)	Initial: 1 wipe	Batch: EGC/5239 (HBN: 134548)	Percent Solid: NA
Prepared: 09/09/2014	Final: 10 mL	Analyzed: 09/09/2014 00:00	Report Basis: Wet

Analyte	ug/sample	RL (ug/sample)	Dilution	Qual.
Aroclor 1016	ND	0.10	1	
Aroclor 1260	ND	0.10	1	
Aroclor 1221	ND	0.20	1	
Aroclor 1232	ND	0.10	1	
Aroclor 1242	ND	0.10	1	
Aroclor 1248	ND	0.10	1	
Aroclor 1254	ND	0.10	1	
Aroclor 1268	ND	0.10	1	
Aroclor 1262	ND	0.10	1	
Total PCBs	ND	0.10	1	

## Comments

### Quality Control: SW 8082 - (HBN: 134548)

Aroclor 1232 fails low in both the LCS and LCSD. (72.6 and 74.1 respectively) The lower limit is 75. All instrument QC passes. Samples are wipes and cannot be re-extracted. NC/CAR 836 was initiated.



# ANALYTICAL REPORT

Workorder: **34-1425222**  
Client: Environ Corporation  
Project Manager: Paul E. Pope

**Report Authorization** (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method	Analyst	Peer Review
SW 8082	/S/ Jessica Helland 09/10/2014 12:09	/S/ Mila V. Potekhin 09/10/2014 14:09

## Laboratory Contact Information

ALS Environmental  
960 W Levoy Drive  
Salt Lake City, Utah 84123

Phone: (801) 266-7700  
Email: alsit.lab@ALSGlobal.com  
Web: www.alsslccom

## General Lab Comments

The results provided in this report relate only to the items tested.  
Samples were received in acceptable condition unless otherwise noted.  
Samples have not been blank corrected unless otherwise noted.  
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACCLASS (DoD ELAP) Utah (NELAC) Nevada Oklahoma Iowa Florida (TNI) Texas (TNI)	ADE-1420 DATA1 UT00009 UT00009 IA# 376 E871067 T104704456-11-1	<a href="http://www.aclasscorp.com">http://www.aclasscorp.com</a> <a href="http://health.utah.gov/lab/labimp/">http://health.utah.gov/lab/labimp/</a> <a href="http://ndep.nv.gov/bsdw/labservice.htm">http://ndep.nv.gov/bsdw/labservice.htm</a> <a href="http://www.deq.state.ok.us/CSDnew/">http://www.deq.state.ok.us/CSDnew/</a> <a href="http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx">http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx</a> <a href="http://www.dep.state.fl.us/labs/bars/sas/qa/">http://www.dep.state.fl.us/labs/bars/sas/qa/</a> <a href="http://www.tceq.texas.gov/field/qa/lab_accred_certif.html">http://www.tceq.texas.gov/field/qa/lab_accred_certif.html</a>
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	<a href="http://www.aihaaccreditedlabs.org">http://www.aihaaccreditedlabs.org</a>
Lead Testing: CPSC Soil, Dust, Paint ,Air	ACCLASS (ISO 17025, CPSC) AIHA (ISO 17025, AIHA ELLAP and NLLAP)	ADE-1420 101574	<a href="http://www.aclasscorp.com">http://www.aclasscorp.com</a> <a href="http://www.aihaaccreditedlabs.org">http://www.aihaaccreditedlabs.org</a>
Dietary Supplements	ACCLASS (ISO 17025)	ADE-1420	<a href="http://www.aclasscorp.com">http://www.aclasscorp.com</a>



## ANALYTICAL REPORT

Workorder: **34-1425222**

Client: Environ Corporation

Project Manager: Paul E. Pope

### Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.

RL = Reporting Limit, a verified value of method/media/instrument sensitivity.

CRDL = Contract Required Detection Limit

Reg. Limit = Regulatory Limit.

ND = Not Detected, testing result not detected above the MDL or RL.

< This testing result is less than the numerical value.

\*\* No result could be reported, see sample comments for details.

### Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.

J = Qualifier Indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.

B = Qualifier indicates that the analyte was detected in the blank.

E = Qualifier indicates that the analyte result exceeds calibration range.

P = Qualifier indicates that the RPD between the two columns is greater than 40%.



# Quality Control Sample Batch Report

## Analysis Information

**Workorder:** 1425222

**Limits:** Historical/Performance  
**Basis:** ALS Laboratory Group

**Preparation:** EPA 3550, Sonic Ext, Wipe  
**Batch:** ENVX/19866 (HBN: 134426)  
**Prepared By:** Joseph Gress

**Analysis:** SW 8082  
**Batch:** EGC/5239 (HBN: 134548)  
**Analyzed By:** Jessica Helland

## Blank

<b>MB:</b> 410435			
<b>Analyzed:</b> 09/09/2014 00:00			
<b>Units:</b> ug/sample			
Analyte	Result	MDL	RL
Aroclor 1016	ND	0.0252	0.100
Aroclor 1260	ND	0.0224	0.100
Aroclor 1221	ND	0.0304	0.200
Aroclor 1232	ND	0.0129	0.100
Aroclor 1242	ND	0.00612	0.100
Aroclor 1248	ND	0.0157	0.100
Aroclor 1254	ND	0.0113	0.100
Aroclor 1268	ND	NA	0.100
Aroclor 1262	ND	NA	0.100

## Laboratory Control Sample - Laboratory Control Sample Duplicate

<b>LCS:</b> 410436						<b>LCSD:</b> 410437					
<b>Analyzed:</b> 09/09/2014 00:00						<b>Analyzed:</b> 09/09/2014 00:00					
<b>Dilution:</b> 1						<b>Dilution:</b> 1					
<b>Units:</b> ug/sample						<b>Units:</b> ug/sample					
Analyte	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits		
Aroclor 1221	4.09	5.00	81.8	75.0	125.0	4.11	82.2	0.417	0.0	35.0	
Aroclor 1232	3.63	5.00	* 72.6	75.0	125.0	3.71	* 74.1	2.10	0.0	35.0	
Aroclor 1016	3.96	5.00	79.1	75.0	129.3	3.98	79.5	0.522	0.0	35.0	
Aroclor 1242	4.03	5.00	80.5	75.0	125.0	4.03	80.6	0.0497	0.0	35.0	
Aroclor 1248	4.12	5.00	82.5	75.0	125.0	4.15	83.0	0.595	0.0	35.0	
Aroclor 1254	3.88	5.00	77.7	75.0	125.0	3.90	78.0	0.444	0.0	35.0	
Aroclor 1260	4.02	5.00	80.4	67.7	129.9	4.04	80.8	0.511	0.0	35.0	
Aroclor 1262	4.35	5.00	87.1	75.0	125.0	4.38	87.7	0.707	0.0	35.0	
Aroclor 1268	4.66	5.00	93.2	75.0	125.0	4.72	94.4	1.19	0.0	35.0	

## Surrogate Recoveries

Surrogate	Tetrachloro-m-xylene		
QC Limits	55.8	153.9	
Units	ug/sample		
Lab ID	Result	Target	% Recovery
1425222005	0.520	0.500	104
1425222009	0.505	0.500	101
410437-LCSD	0.430	0.500	86.1
1425222008	0.526	0.500	105
1425222004	0.452	0.500	90.5
410436-LCS	0.426	0.500	85.1
1425222013	0.553	0.500	111



# Quality Control Sample Batch Report

## Analysis Information

Workorder: 1425222

Limits: Historical/Performance  
Basis: ALS Laboratory Group

Preparation: EPA 3550, Sonic Ext, Wipe  
Batch: ENVX/19866 (HBN: 134426)  
Prepared By: Joseph Gress

Analysis: SW 8082  
Batch: EGC/5239 (HBN: 134548)  
Analyzed By: Jessica Helland

## Surrogate Recoveries

Surrogate	Tetrachloro-m-xylene		
QC Limits	55.8	153.9	
Units	ug/sample		
Lab ID	Result	Target	% Recovery
1425222007	0.509	0.500	102
1425222001	0.430	0.500	86.1
1425222002	0.429	0.500	85.8
410435-MB	0.435	0.500	87.0
1425222011	0.567	0.500	113
1425222015	0.526	0.500	105
1425222003	0.426	0.500	85.2
1425222016	0.552	0.500	110
1425222014	0.560	0.500	112
1425222006	0.466	0.500	93.1
1425222010	0.507	0.500	101
1425222012	0.550	0.500	110



# Quality Control Sample Batch Report

## Analysis Information

**Workorder:** 1425222

**Limits:** Historical/Performance  
**Basis:** ALS Laboratory Group

**Preparation:** EPA 3550, Sonic Ext, Wipe  
**Batch:** ENVX/19866 (HBN: 134426)  
**Prepared By:** Joseph Gress

**Analysis:** SW 8082  
**Batch:** EGC/5239 (HBN: 134548)  
**Analyzed By:** Jessica Helland

## Comments

Aroclor 1232 fails low in both the LCS and LCSD. (72.6 and 74.1 respectively) The lower limit is 75. All instrument QC passes. Samples are wipes and cannot be re-extracted. NC/CAR 836 was initiated.

## QC Data Approved and Reviewed by

Jessica Helland

Analyst

Mila V. Potekhin

Peer Review

9/10/2014

Date

## Symbols and Definitions

- \* - Analyte above reporting limit or outside of control limits
- ▲ - Sample result is greater than 4 times the spike added
- - Sample and Matrix Duplicate less than 5 times the reporting limit

RPD - Relative % Difference (Spike / Spike Duplicate)  
ND - Not Detected (U - Qualifier also flags analyte as not detected)  
NA - Not Applicable  
QC results are not adjusted for moisture correction, where applicable

**Client:** ENVIRON International Corp.  
**Project:** Indianapolis, IN  
**WorkOrder:** 1409287

**QUALIFIERS,  
ACRONYMS, UNITS**

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<b><u>Acronym</u></b>	<b><u>Description</u></b>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<b><u>Units Reported</u></b>	<b><u>Description</u></b>
µg/Kg	Micrograms per Kilogram

**ALS Group USA, Corp****Date:** 15-Sep-14**Client:** ENVIRON International Corp.**Project:** Indianapolis, IN**Sample ID:** 090414-B-072**Collection Date:** 9/4/2014 06:04 PM**Work Order:** 1409287**Lab ID:** 1409287-01**Matrix:** SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>						
Aroclor 1016	U	110,000	µg/Kg	2500	Prep: SW3550 / 9/8/14	Analyst: <b>JG</b>
Aroclor 1221	U	110,000	µg/Kg	2500	9/11/2014 06:26 PM	
Aroclor 1232	U	110,000	µg/Kg	2500	9/11/2014 06:26 PM	
Aroclor 1242	U	110,000	µg/Kg	2500	9/11/2014 06:26 PM	
Aroclor 1248	U	110,000	µg/Kg	2500	9/11/2014 06:26 PM	
Aroclor 1254	U	110,000	µg/Kg	2500	9/11/2014 06:26 PM	
Aroclor 1260	8,000,000	110,000	µg/Kg	2500	9/11/2014 06:26 PM	
Aroclor 1262	U	110,000	µg/Kg	2500	9/11/2014 06:26 PM	
Aroclor 1268	U	110,000	µg/Kg	2500	9/11/2014 06:26 PM	
PCBs, Total	8,000,000		µg/Kg	2500	9/11/2014 06:26 PM	
Surr: Decachlorobiphenyl	0	40-140	%REC	2500	9/11/2014 06:26 PM	
Surr: Tetrachloro-m-xylene	0	45-124	%REC	2500	9/11/2014 06:26 PM	

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**ALS Group USA, Corp****Date:** 15-Sep-14**Client:** ENVIRON International Corp.**Project:** Indianapolis, IN**Sample ID:** 090414-B-073**Collection Date:** 9/4/2014 05:01 PM**Work Order:** 1409287**Lab ID:** 1409287-02**Matrix:** SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>						
Aroclor 1016	U		<b>SW8082</b>		Prep: SW3550 / 9/8/14	Analyst: <b>JG</b>
Aroclor 1221	U		<b>83,000</b>	<b>µg/Kg</b>	2500	9/11/2014 06:09 PM
Aroclor 1232	U		<b>83,000</b>	<b>µg/Kg</b>	2500	9/11/2014 06:09 PM
Aroclor 1242	U		<b>83,000</b>	<b>µg/Kg</b>	2500	9/11/2014 06:09 PM
Aroclor 1248	U		<b>83,000</b>	<b>µg/Kg</b>	2500	9/11/2014 06:09 PM
Aroclor 1254	U		<b>83,000</b>	<b>µg/Kg</b>	2500	9/11/2014 06:09 PM
Aroclor 1260	<b>6,300,000</b>		<b>83,000</b>	<b>µg/Kg</b>	2500	9/11/2014 06:09 PM
Aroclor 1262	U		<b>83,000</b>	<b>µg/Kg</b>	2500	9/11/2014 06:09 PM
Aroclor 1268	U		<b>83,000</b>	<b>µg/Kg</b>	2500	9/11/2014 06:09 PM
<b>PCBs, Total</b>	<b>6,300,000</b>			<b>µg/Kg</b>	2500	9/11/2014 06:09 PM
Surr: Decachlorobiphenyl	0		40-140	%REC	2500	9/11/2014 06:09 PM
Surr: Tetrachloro-m-xylene	0		45-124	%REC	2500	9/11/2014 06:09 PM

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**ALS Group USA, Corp****Date:** 15-Sep-14**Client:** ENVIRON International Corp.**Project:** Indianapolis, IN**Sample ID:** 090414-B-074**Collection Date:** 9/4/2014 04:55 PM**Work Order:** 1409287**Lab ID:** 1409287-03**Matrix:** SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>						
Aroclor 1016	U		<b>SW8082</b>		Prep: SW3550 / 9/8/14	Analyst: <b>JG</b>
Aroclor 1221	U		33,000	µg/Kg	100	9/11/2014 06:43 PM
Aroclor 1232	U		33,000	µg/Kg	100	9/11/2014 06:43 PM
Aroclor 1242	U		33,000	µg/Kg	100	9/11/2014 06:43 PM
Aroclor 1248	U		33,000	µg/Kg	100	9/11/2014 06:43 PM
Aroclor 1254	U		33,000	µg/Kg	100	9/11/2014 06:43 PM
Aroclor 1260	<b>2,700,000</b>		33,000	µg/Kg	100	9/11/2014 06:43 PM
Aroclor 1262	U		33,000	µg/Kg	100	9/11/2014 06:43 PM
Aroclor 1268	U		33,000	µg/Kg	100	9/11/2014 06:43 PM
PCBs, Total	<b>2,700,000</b>			µg/Kg	100	9/11/2014 06:43 PM
Surr: Decachlorobiphenyl	0		40-140	%REC	100	9/11/2014 06:43 PM
Surr: Tetrachloro-m-xylene	0		45-124	%REC	100	9/11/2014 06:43 PM

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**ALS Group USA, Corp****Date:** 15-Sep-14**Client:** ENVIRON International Corp.**Project:** Indianapolis, IN**Sample ID:** 090414-B-075**Collection Date:** 9/4/2014 04:51 PM**Work Order:** 1409287**Lab ID:** 1409287-04**Matrix:** SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>			
Aroclor 1016	U		4,500	µg/Kg	50	9/11/2014 06:59 PM
Aroclor 1221	U		4,500	µg/Kg	50	9/11/2014 06:59 PM
Aroclor 1232	U		4,500	µg/Kg	50	9/11/2014 06:59 PM
Aroclor 1242	U		4,500	µg/Kg	50	9/11/2014 06:59 PM
Aroclor 1248	U		4,500	µg/Kg	50	9/11/2014 06:59 PM
Aroclor 1254	U		4,500	µg/Kg	50	9/11/2014 06:59 PM
Aroclor 1260	250,000		4,500	µg/Kg	50	9/11/2014 06:59 PM
Aroclor 1262	U		4,500	µg/Kg	50	9/11/2014 06:59 PM
Aroclor 1268	U		4,500	µg/Kg	50	9/11/2014 06:59 PM
PCBs, Total	250,000			µg/Kg	50	9/11/2014 06:59 PM
Surr: Decachlorobiphenyl	29.3	S	40-140	%REC	50	9/11/2014 06:59 PM
Surr: Tetrachloro-m-xylene	0	S	45-124	%REC	50	9/11/2014 06:59 PM

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**ALS Group USA, Corp****Date:** 15-Sep-14**Client:** ENVIRON International Corp.**Project:** Indianapolis, IN**Sample ID:** 090414-B-076**Collection Date:** 9/4/2014 04:38 PM**Work Order:** 1409287**Lab ID:** 1409287-05**Matrix:** SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>						
Aroclor 1016	U		<b>SW8082</b> 20,000	µg/Kg	500	9/12/2014 09:44 AM
Aroclor 1221	U		20,000	µg/Kg	500	9/12/2014 09:44 AM
Aroclor 1232	U		20,000	µg/Kg	500	9/12/2014 09:44 AM
Aroclor 1242	U		20,000	µg/Kg	500	9/12/2014 09:44 AM
Aroclor 1248	U		20,000	µg/Kg	500	9/12/2014 09:44 AM
Aroclor 1254	U		20,000	µg/Kg	500	9/12/2014 09:44 AM
Aroclor 1260	<b>1,200,000</b>		20,000	µg/Kg	500	9/12/2014 09:44 AM
Aroclor 1262	U		20,000	µg/Kg	500	9/12/2014 09:44 AM
Aroclor 1268	U		20,000	µg/Kg	500	9/12/2014 09:44 AM
PCBs, Total	<b>1,200,000</b>			µg/Kg	500	9/12/2014 09:44 AM
Surr: Decachlorobiphenyl	0	S	40-140	%REC	500	9/12/2014 09:44 AM
Surr: Tetrachloro-m-xylene	0	S	45-124	%REC	500	9/12/2014 09:44 AM

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**ALS Group USA, Corp****Date:** 15-Sep-14**Client:** ENVIRON International Corp.**Project:** Indianapolis, IN**Sample ID:** 090414-B-077**Collection Date:** 9/4/2014 04:34 PM**Work Order:** 1409287**Lab ID:** 1409287-06**Matrix:** SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>						
Aroclor 1016	U		<b>SW8082</b>		Prep: SW3550 / 9/8/14	Analyst: <b>JG</b>
Aroclor 1221	U		<b>3,400</b>	<b>µg/Kg</b>	50	9/11/2014 07:33 PM
Aroclor 1232	U		<b>3,400</b>	<b>µg/Kg</b>	50	9/11/2014 07:33 PM
Aroclor 1242	U		<b>3,400</b>	<b>µg/Kg</b>	50	9/11/2014 07:33 PM
Aroclor 1248	U		<b>3,400</b>	<b>µg/Kg</b>	50	9/11/2014 07:33 PM
Aroclor 1254	U		<b>3,400</b>	<b>µg/Kg</b>	50	9/11/2014 07:33 PM
Aroclor 1260	<b>190,000</b>		<b>3,400</b>	<b>µg/Kg</b>	50	9/11/2014 07:33 PM
Aroclor 1262	U		<b>3,400</b>	<b>µg/Kg</b>	50	9/11/2014 07:33 PM
Aroclor 1268	U		<b>3,400</b>	<b>µg/Kg</b>	50	9/11/2014 07:33 PM
<b>PCBs, Total</b>	<b>190,000</b>			<b>µg/Kg</b>	50	9/11/2014 07:33 PM
Surr: Decachlorobiphenyl	0	S	40-140	%REC	50	9/11/2014 07:33 PM
Surr: Tetrachloro-m-xylene	0	S	45-124	%REC	50	9/11/2014 07:33 PM

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**ALS Group USA, Corp****Date:** 15-Sep-14**Client:** ENVIRON International Corp.**Project:** Indianapolis, IN**Sample ID:** 090414-B-096**Collection Date:** 9/4/2014 10:54 AM**Work Order:** 1409287**Lab ID:** 1409287-25**Matrix:** SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>			
Aroclor 1016	U		100	µg/Kg	1	9/10/2014 07:08 AM
Aroclor 1221	U		100	µg/Kg	1	9/10/2014 07:08 AM
Aroclor 1232	U		100	µg/Kg	1	9/10/2014 07:08 AM
Aroclor 1242	U		100	µg/Kg	1	9/10/2014 07:08 AM
Aroclor 1248	U		100	µg/Kg	1	9/10/2014 07:08 AM
Aroclor 1254	U		100	µg/Kg	1	9/10/2014 07:08 AM
Aroclor 1260	130		100	µg/Kg	1	9/10/2014 07:08 AM
Aroclor 1262	U		100	µg/Kg	1	9/10/2014 07:08 AM
Aroclor 1268	U		100	µg/Kg	1	9/10/2014 07:08 AM
<b>PCBs, Total</b>	<b>130</b>			<b>µg/Kg</b>	<b>1</b>	<b>9/10/2014 07:08 AM</b>
Surr: Decachlorobiphenyl	108		40-140	%REC	1	9/10/2014 07:08 AM
Surr: Tetrachloro-m-xylene	105		45-124	%REC	1	9/10/2014 07:08 AM

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**ALS Group USA, Corp****Date:** 15-Sep-14**Client:** ENVIRON International Corp.**Project:** Indianapolis, IN**Sample ID:** 090414-B-097**Collection Date:** 9/4/2014 10:40 AM**Work Order:** 1409287**Lab ID:** 1409287-26**Matrix:** SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>			
Aroclor 1016	U		670	µg/Kg	1	9/10/2014 07:25 AM
Aroclor 1221	U		670	µg/Kg	1	9/10/2014 07:25 AM
Aroclor 1232	U		670	µg/Kg	1	9/10/2014 07:25 AM
Aroclor 1242	U		670	µg/Kg	1	9/10/2014 07:25 AM
Aroclor 1248	U		670	µg/Kg	1	9/10/2014 07:25 AM
Aroclor 1254	U		670	µg/Kg	1	9/10/2014 07:25 AM
Aroclor 1260	300	J	670	µg/Kg	1	9/10/2014 07:25 AM
Aroclor 1262	U		670	µg/Kg	1	9/10/2014 07:25 AM
Aroclor 1268	U		670	µg/Kg	1	9/10/2014 07:25 AM
PCBs, Total	300			µg/Kg	1	9/10/2014 07:25 AM
Surr: Decachlorobiphenyl	107		40-140	%REC	1	9/10/2014 07:25 AM
Surr: Tetrachloro-m-xylene	100		45-124	%REC	1	9/10/2014 07:25 AM

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**ALS Group USA, Corp****Date:** 15-Sep-14**Client:** ENVIRON International Corp.**Project:** Indianapolis, IN**Sample ID:** 090414-B-098**Collection Date:** 9/4/2014 10:30 AM**Work Order:** 1409287**Lab ID:** 1409287-27**Matrix:** SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>						
Aroclor 1016	U		430	µg/Kg	1	9/10/2014 07:42 AM
Aroclor 1221	U		430	µg/Kg	1	9/10/2014 07:42 AM
Aroclor 1232	U		430	µg/Kg	1	9/10/2014 07:42 AM
Aroclor 1242	U		430	µg/Kg	1	9/10/2014 07:42 AM
Aroclor 1248	U		430	µg/Kg	1	9/10/2014 07:42 AM
Aroclor 1254	U		430	µg/Kg	1	9/10/2014 07:42 AM
Aroclor 1260	130,000		2,100	µg/Kg	5	9/15/2014 08:49 AM
Aroclor 1262	U		430	µg/Kg	1	9/10/2014 07:42 AM
Aroclor 1268	U		430	µg/Kg	1	9/10/2014 07:42 AM
PCBs, Total	130,000			µg/Kg	5	9/15/2014 08:49 AM
Surr: Decachlorobiphenyl	97.1		40-140	%REC	1	9/10/2014 07:42 AM
Surr: Tetrachloro-m-xylene	99.4		45-124	%REC	1	9/10/2014 07:42 AM

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**ALS Group USA, Corp****Date:** 15-Sep-14**Client:** ENVIRON International Corp.**Project:** Indianapolis, IN**Sample ID:** 090414-B-099**Collection Date:** 9/4/2014 10:21 AM**Work Order:** 1409287**Lab ID:** 1409287-28**Matrix:** SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>			
Aroclor 1016	U		120	µg/Kg	1	9/10/2014 07:59 AM
Aroclor 1221	U		120	µg/Kg	1	9/10/2014 07:59 AM
Aroclor 1232	U		120	µg/Kg	1	9/10/2014 07:59 AM
Aroclor 1242	U		120	µg/Kg	1	9/10/2014 07:59 AM
Aroclor 1248	U		120	µg/Kg	1	9/10/2014 07:59 AM
Aroclor 1254	U		120	µg/Kg	1	9/10/2014 07:59 AM
Aroclor 1260	<b>240</b>		120	µg/Kg	1	9/10/2014 07:59 AM
Aroclor 1262	U		120	µg/Kg	1	9/10/2014 07:59 AM
Aroclor 1268	U		120	µg/Kg	1	9/10/2014 07:59 AM
<b>PCBs, Total</b>	<b>240</b>			µg/Kg	1	9/10/2014 07:59 AM
Surr: Decachlorobiphenyl	92.3		40-140	%REC	1	9/10/2014 07:59 AM
Surr: Tetrachloro-m-xylene	110		45-124	%REC	1	9/10/2014 07:59 AM

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**ALS Group USA, Corp****Date:** 15-Sep-14**Client:** ENVIRON International Corp.**Project:** Indianapolis, IN**Sample ID:** 090414-B-100**Collection Date:** 9/4/2014 10:16 AM**Work Order:** 1409287**Lab ID:** 1409287-29**Matrix:** SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>						
Aroclor 1016	U		<b>150</b>	<b>µg/Kg</b>	1	9/10/2014 08:15 AM
Aroclor 1221	U		<b>150</b>	<b>µg/Kg</b>	1	9/10/2014 08:15 AM
Aroclor 1232	U		<b>150</b>	<b>µg/Kg</b>	1	9/10/2014 08:15 AM
Aroclor 1242	U		<b>150</b>	<b>µg/Kg</b>	1	9/10/2014 08:15 AM
Aroclor 1248	U		<b>150</b>	<b>µg/Kg</b>	1	9/10/2014 08:15 AM
Aroclor 1254	U		<b>150</b>	<b>µg/Kg</b>	1	9/10/2014 08:15 AM
Aroclor 1260	U		<b>150</b>	<b>µg/Kg</b>	1	9/10/2014 08:15 AM
Aroclor 1262	U		<b>150</b>	<b>µg/Kg</b>	1	9/10/2014 08:15 AM
Aroclor 1268	U		<b>150</b>	<b>µg/Kg</b>	1	9/10/2014 08:15 AM
<b>PCBs, Total</b>	U			<b>µg/Kg</b>	1	9/10/2014 08:15 AM
Surr: Decachlorobiphenyl	98.2		40-140	%REC	1	9/10/2014 08:15 AM
Surr: Tetrachloro-m-xylene	101		45-124	%REC	1	9/10/2014 08:15 AM

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

Client: ENVIRON International Corp.

**QC BATCH REPORT**

Work Order: 1409287

Project: Indianapolis, IN

Batch ID: **62526**Instrument ID **GC14**Method: **SW8082**

<b>Mblk</b>		Sample ID: <b>PBLKS1-62526-62526</b>		Units: <b>µg/Kg</b>		Analysis Date: <b>9/11/2014 12:48 PM</b>			
Client ID:		Run ID: <b>GC14_140911A</b>		SeqNo: <b>2930911</b>		Prep Date: <b>9/8/2014</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit	Qual
Aroclor 1016	U	33							
Aroclor 1221	U	33							
Aroclor 1232	U	33							
Aroclor 1242	U	33							
Aroclor 1248	U	33							
Aroclor 1254	U	33							
Aroclor 1260	U	33							
Aroclor 1262	U	33							
Aroclor 1268	U	33							
PCBs, Total	U	0							
Surr: Decachlorobiphenyl	145.9	0	166	0	87.9	50-130	0		
Surr: Tetrachloro-m-xylene	135.8	0	166	0	81.8	45-124	0		

<b>LCS</b>		Sample ID: <b>PLCSS1-62526-62526</b>		Units: <b>µg/Kg</b>		Analysis Date: <b>9/11/2014 01:05 PM</b>			
Client ID:		Run ID: <b>GC14_140911A</b>		SeqNo: <b>2930915</b>		Prep Date: <b>9/8/2014</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit	Qual
Aroclor 1016	1608	33	1666	0	96.5	50-130	0		
Aroclor 1260	1557	33	1666	0	93.5	50-130	0		
Surr: Decachlorobiphenyl	146.2	0	166	0	88.1	50-130	0		
Surr: Tetrachloro-m-xylene	142.3	0	166	0	85.7	45-124	0		

The following samples were analyzed in this batch:

1409287-01A	1409287-02A	1409287-03A
1409287-04A	1409287-05A	1409287-06A
1409287-07A	1409287-08A	1409287-09A
1409287-10A	1409287-11A	1409287-12A
1409287-13A		

**Client:** ENVIRON International Corp.  
**Work Order:** 1409287  
**Project:** Indianapolis, IN

## QC BATCH REPORT

Batch ID: 62533      Instrument ID **GC14**      Method: **SW8082**

MBLK		Sample ID: <b>PBLKS1-62533-62533</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>9/10/2014 03:14 AM</b>			
Client ID:		Run ID: <b>GC14_140909A</b>			SeqNo: <b>2932802</b>		Prep Date: <b>9/8/2014</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	U	33								
Aroclor 1221	U	33								
Aroclor 1232	U	33								
Aroclor 1242	U	33								
Aroclor 1248	U	33								
Aroclor 1254	U	33								
Aroclor 1260	U	33								
Aroclor 1262	U	33								
Aroclor 1268	U	33								
PCBs, Total	U	0								
<i>Surr: Decachlorobiphenyl</i>	168.6	0	166	0	102	50-130	0			
<i>Surr: Tetrachloro-m-xylene</i>	162.7	0	166	0	98	45-124	0			

LCS		Sample ID: <b>PLCSS1-62533-62533</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>9/10/2014 03:30 AM</b>			
Client ID:		Run ID: <b>GC14_140909A</b>			SeqNo: <b>2932803</b>		Prep Date: <b>9/8/2014</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	1772	33	1666	0	106	50-130	0			
Aroclor 1260	1746	33	1666	0	105	50-130	0			
<i>Surr: Decachlorobiphenyl</i>	169.6	0	166	0	102	50-130	0			
<i>Surr: Tetrachloro-m-xylene</i>	166.4	0	166	0	100	45-124	0			

The following samples were analyzed in this batch:

1409287-14A	1409287-15A	1409287-16A
1409287-17A	1409287-18A	1409287-19A
1409287-20A	1409287-21A	1409287-22A
1409287-23A	1409287-24A	1409287-25A
1409287-26A	1409287-27A	1409287-28A
1409287-29A		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** ENVIRON International Corp.  
**Project:** Indianapolis IN  
**WorkOrder:** 1409456

**QUALIFIERS,  
ACRONYMS, UNITS**

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<b><u>Acronym</u></b>	<b><u>Description</u></b>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<b><u>Units Reported</u></b>	<b><u>Description</u></b>
µg/Kg	Micrograms per Kilogram
µg/L	Micrograms per Liter
mg/Kg	Milligrams per Kilogram

**ALS Group USA, Corp****Date:** 15-Sep-14**Client:** ENVIRON International Corp.**Project:** Indianapolis IN**Sample ID:** 090414-VO-1**Collection Date:** 9/4/2014**Work Order:** 1409456**Lab ID:** 1409456-01**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>						
Aroclor 1016	U		20	µg/L	1	9/12/2014 11:19 PM
Aroclor 1221	U		20	µg/L	1	9/12/2014 11:19 PM
Aroclor 1232	U		20	µg/L	1	9/12/2014 11:19 PM
Aroclor 1242	U		20	µg/L	1	9/12/2014 11:19 PM
Aroclor 1248	U		20	µg/L	1	9/12/2014 11:19 PM
Aroclor 1254	U		20	µg/L	1	9/12/2014 11:19 PM
Aroclor 1260	U		20	µg/L	1	9/12/2014 11:19 PM
Aroclor 1262	U		20	µg/L	1	9/12/2014 11:19 PM
Aroclor 1268	U		20	µg/L	1	9/12/2014 11:19 PM
<b>PCBs, Total</b>	U			<b>µg/L</b>	1	9/12/2014 11:19 PM
Surr: Decachlorobiphenyl	64.0		40-110	%REC	1	9/12/2014 11:19 PM
Surr: Tetrachloro-m-xylene	75.0		40-110	%REC	1	9/12/2014 11:19 PM

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**ALS Group USA, Corp****Date:** 15-Sep-14**Client:** ENVIRON International Corp.**Project:** Indianapolis IN**Sample ID:** 090414-VO-2**Collection Date:** 9/4/2014**Work Order:** 1409456**Lab ID:** 1409456-02**Matrix:** OIL

<b>Analyses</b>	<b>Result</b>	<b>Qual</b>	<b>Report Limit</b>	<b>Units</b>	<b>Dilution Factor</b>	<b>Date Analyzed</b>
<b>PCBS</b>						
Aroclor 1016	U	9.9	mg/Kg	10	Prep: SW3580 / 9/11/14	Analyst: <b>JG</b> 9/12/2014 10:00 AM
Aroclor 1221	U	9.9	mg/Kg	10	9/12/2014 10:00 AM	
Aroclor 1232	U	9.9	mg/Kg	10	9/12/2014 10:00 AM	
Aroclor 1242	U	9.9	mg/Kg	10	9/12/2014 10:00 AM	
Aroclor 1248	U	9.9	mg/Kg	10	9/12/2014 10:00 AM	
Aroclor 1254	U	9.9	mg/Kg	10	9/12/2014 10:00 AM	
Aroclor 1260	U	9.9	mg/Kg	10	9/12/2014 10:00 AM	
Aroclor 1262	U	9.9	mg/Kg	10	9/12/2014 10:00 AM	
Aroclor 1268	U	9.9	mg/Kg	10	9/12/2014 10:00 AM	
PCBs, Total	U	9.9	mg/Kg	10	9/12/2014 10:00 AM	
Surr: Decachlorobiphenyl	102	40-140	%REC	10	9/12/2014 10:00 AM	
Surr: Tetrachloro-m-xylene	71.5	40-110	%REC	10	9/12/2014 10:00 AM	

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

Client: ENVIRON International Corp.

**QC BATCH REPORT**

Work Order: 1409456

Project: Indianapolis IN

Batch ID: 62652

Instrument ID GC14

Method: SW8082

MBLK			Sample ID: PBLKW1-62652-62652		Units: µg/L		Analysis Date: 9/12/2014 10:15 PM			
Client ID:		Run ID: GC14_140912B		SeqNo: 2935369		Prep Date: 9/11/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	U	0.20								
Aroclor 1221	U	0.20								
Aroclor 1232	U	0.20								
Aroclor 1242	U	0.20								
Aroclor 1248	U	0.20								
Aroclor 1254	U	0.20								
Aroclor 1260	U	0.20								
Aroclor 1262	U	0.20								
Aroclor 1268	U	0.20								
PCBs, Total	U	0								
Surr: Decachlorobiphenyl	0.07	0	0.1	0	70	40-110		0		
Surr: Tetrachloro-m-xylene	0.076	0	0.1	0	76	40-110		0		

LCS			Sample ID: PLCSW1-62652-62652		Units: µg/L		Analysis Date: 9/12/2014 10:31 PM			
Client ID:		Run ID: GC14_140912B		SeqNo: 2935370		Prep Date: 9/11/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	1.501	0.20	2.5	0	60	50-130		0		
Aroclor 1260	1.654	0.20	2.5	0	66.2	50-130		0		
Surr: Decachlorobiphenyl	0.067	0	0.1	0	67	40-110		0		
Surr: Tetrachloro-m-xylene	0.062	0	0.1	0	62	40-110		0		

MS			Sample ID: 1409390-01B MS		Units: µg/L		Analysis Date: 9/12/2014 11:36 PM			
Client ID:		Run ID: GC14_140912B		SeqNo: 2935372		Prep Date: 9/11/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	15.56	2.0	25	0	62.2	40-140		0		
Aroclor 1260	17.88	2.0	25	0	71.5	40-140		0		
Surr: Decachlorobiphenyl	0.73	0	1	0	73	40-110		0		
Surr: Tetrachloro-m-xylene	0.59	0	1	0	59	40-110		0		

MSD			Sample ID: 1409390-01B MSD		Units: µg/L		Analysis Date: 9/12/2014 11:52 PM			
Client ID:		Run ID: GC14_140912B		SeqNo: 2935373		Prep Date: 9/11/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	14.42	2.0	25	0	57.7	40-140	15.56	7.61	50	
Aroclor 1260	15.61	2.0	25	0	62.4	40-140	17.88	13.6	50	
Surr: Decachlorobiphenyl	0.71	0	1	0	71	40-110	0.73	2.78	50	
Surr: Tetrachloro-m-xylene	0.6	0	1	0	60	40-110	0.59	1.68	50	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** ENVIRON International Corp.  
**Work Order:** 1409456  
**Project:** Indianapolis IN

## QC BATCH REPORT

---

Batch ID: **62652**      Instrument ID **GC14**      Method: **SW8082**

---

The following samples were analyzed in this batch:

1409456-01A

---

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** ENVIRON International Corp.  
**Work Order:** 1409456  
**Project:** Indianapolis IN

## QC BATCH REPORT

Batch ID: 62653      Instrument ID **GC14**      Method: **SW8082**

MBLK		Sample ID: <b>PBLKS1-62653-62653</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>9/11/2014 10:03 PM</b>			
Client ID:		Run ID: <b>GC14_140911A</b>			SeqNo: <b>2934651</b>		Prep Date: <b>9/11/2014</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	U	33								
Aroclor 1221	U	33								
Aroclor 1232	U	33								
Aroclor 1242	U	33								
Aroclor 1248	U	33								
Aroclor 1254	U	33								
Aroclor 1260	U	33								
Aroclor 1262	U	33								
Aroclor 1268	U	33								
PCBs, Total	U	0								
<i>Surr: Decachlorobiphenyl</i>	178.5	0	166	0	108	50-130	0			
<i>Surr: Tetrachloro-m-xylene</i>	168	0	166	0	101	45-124	0			

LCS		Sample ID: <b>PLCSS1-62653-62653</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>9/11/2014 10:20 PM</b>			
Client ID:		Run ID: <b>GC14_140911A</b>			SeqNo: <b>2934652</b>		Prep Date: <b>9/11/2014</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	1822	33	1666	0	109	50-130	0			
Aroclor 1260	1760	33	1666	0	106	50-130	0			
<i>Surr: Decachlorobiphenyl</i>	175.8	0	166	0	106	50-130	0			
<i>Surr: Tetrachloro-m-xylene</i>	166.3	0	166	0	100	45-124	0			

The following samples were analyzed in this batch:

1409456-03A      1409456-04A      1409456-05A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** ENVIRON International Corp.  
**Work Order:** 1409456  
**Project:** Indianapolis IN

## QC BATCH REPORT

Batch ID: **62759**      Instrument ID **GC14**      Method: **SW8082**

MBLK		Sample ID: <b>PBLKO1-62759-62759</b>			Units: <b>mg/Kg</b>		Analysis Date: <b>9/11/2014 10:37 PM</b>			
Client ID:		Run ID: <b>GC14_140911A</b>			SeqNo: <b>2934653</b>		Prep Date: <b>9/11/2014</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	U	1.0								
Aroclor 1221	U	1.0								
Aroclor 1232	U	1.0								
Aroclor 1242	U	1.0								
Aroclor 1248	U	1.0								
Aroclor 1254	U	1.0								
Aroclor 1260	U	1.0								
Aroclor 1262	U	1.0								
Aroclor 1268	U	1.0								
PCBs, Total	U	1.0								
<i>Surr: Decachlorobiphenyl</i>	1201	0	1000	0	120	50-130	0			
<i>Surr: Tetrachloro-m-xylene</i>	1070	0	1000	0	107	40-110	0			

LCS		Sample ID: <b>PLCSO1-62759-62759</b>			Units: <b>mg/Kg</b>		Analysis Date: <b>9/11/2014 10:54 PM</b>			
Client ID:		Run ID: <b>GC14_140911A</b>			SeqNo: <b>2934654</b>		Prep Date: <b>9/11/2014</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	42920	1.0	50000	0	85.8	50-130	0			E
Aroclor 1260	43670	1.0	50000	0	87.3	50-130	0			E
<i>Surr: Decachlorobiphenyl</i>	966.1	0	1000	0	96.6	50-130	0			
<i>Surr: Tetrachloro-m-xylene</i>	943.6	0	1000	0	94.4	40-110	0			

The following samples were analyzed in this batch:

1409456-02A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** ENVIRON International Corp.  
**Project:** Indianapolis IN  
**WorkOrder:** 1409456

**QUALIFIERS,  
ACRONYMS, UNITS**

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<b><u>Acronym</u></b>	<b><u>Description</u></b>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<b><u>Units Reported</u></b>	<b><u>Description</u></b>
µg/Kg	Micrograms per Kilogram
µg/L	Micrograms per Liter
mg/Kg	Milligrams per Kilogram

**ALS Group USA, Corp****Date:** 15-Sep-14**Client:** ENVIRON International Corp.**Project:** Indianapolis IN**Sample ID:** 090514-B-30**Collection Date:** 9/5/2014**Work Order:** 1409456**Lab ID:** 1409456-05**Matrix:** BULK

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>						
Aroclor 1016	U		190	µg/Kg	1	9/12/2014 12:17 AM
Aroclor 1221	U		190	µg/Kg	1	9/12/2014 12:17 AM
Aroclor 1232	U		190	µg/Kg	1	9/12/2014 12:17 AM
Aroclor 1242	U		190	µg/Kg	1	9/12/2014 12:17 AM
Aroclor 1248	U		190	µg/Kg	1	9/12/2014 12:17 AM
Aroclor 1254	U		190	µg/Kg	1	9/12/2014 12:17 AM
Aroclor 1260	U		190	µg/Kg	1	9/12/2014 12:17 AM
Aroclor 1262	U		190	µg/Kg	1	9/12/2014 12:17 AM
Aroclor 1268	U		190	µg/Kg	1	9/12/2014 12:17 AM
PCBs, Total	U			µg/Kg	1	9/12/2014 12:17 AM
Surr: Decachlorobiphenyl	113		40-140	%REC	1	9/12/2014 12:17 AM
Surr: Tetrachloro-m-xylene	110		45-124	%REC	1	9/12/2014 12:17 AM

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

Client: ENVIRON International Corp.

**QC BATCH REPORT**

Work Order: 1409456

Project: Indianapolis IN

Batch ID: 62652

Instrument ID GC14

Method: SW8082

MBLK			Sample ID: PBLKW1-62652-62652			Units: µg/L		Analysis Date: 9/12/2014 10:15 PM		
Client ID:		Run ID: GC14_140912B		SeqNo: 2935369		Prep Date: 9/11/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	U	0.20								
Aroclor 1221	U	0.20								
Aroclor 1232	U	0.20								
Aroclor 1242	U	0.20								
Aroclor 1248	U	0.20								
Aroclor 1254	U	0.20								
Aroclor 1260	U	0.20								
Aroclor 1262	U	0.20								
Aroclor 1268	U	0.20								
PCBs, Total	U	0								
Surr: Decachlorobiphenyl	0.07	0	0.1	0	70	40-110		0		
Surr: Tetrachloro-m-xylene	0.076	0	0.1	0	76	40-110		0		

LCS			Sample ID: PLCSW1-62652-62652			Units: µg/L		Analysis Date: 9/12/2014 10:31 PM		
Client ID:		Run ID: GC14_140912B		SeqNo: 2935370		Prep Date: 9/11/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	1.501	0.20	2.5	0	60	50-130		0		
Aroclor 1260	1.654	0.20	2.5	0	66.2	50-130		0		
Surr: Decachlorobiphenyl	0.067	0	0.1	0	67	40-110		0		
Surr: Tetrachloro-m-xylene	0.062	0	0.1	0	62	40-110		0		

MS			Sample ID: 1409390-01B MS			Units: µg/L		Analysis Date: 9/12/2014 11:36 PM		
Client ID:		Run ID: GC14_140912B		SeqNo: 2935372		Prep Date: 9/11/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	15.56	2.0	25	0	62.2	40-140		0		
Aroclor 1260	17.88	2.0	25	0	71.5	40-140		0		
Surr: Decachlorobiphenyl	0.73	0	1	0	73	40-110		0		
Surr: Tetrachloro-m-xylene	0.59	0	1	0	59	40-110		0		

MSD			Sample ID: 1409390-01B MSD			Units: µg/L		Analysis Date: 9/12/2014 11:52 PM		
Client ID:		Run ID: GC14_140912B		SeqNo: 2935373		Prep Date: 9/11/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	14.42	2.0	25	0	57.7	40-140	15.56	7.61	50	
Aroclor 1260	15.61	2.0	25	0	62.4	40-140	17.88	13.6	50	
Surr: Decachlorobiphenyl	0.71	0	1	0	71	40-110	0.73	2.78	50	
Surr: Tetrachloro-m-xylene	0.6	0	1	0	60	40-110	0.59	1.68	50	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** ENVIRON International Corp.  
**Work Order:** 1409456  
**Project:** Indianapolis IN

## QC BATCH REPORT

---

Batch ID: **62652**      Instrument ID **GC14**      Method: **SW8082**

---

The following samples were analyzed in this batch:

1409456-01A

---

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** ENVIRON International Corp.  
**Work Order:** 1409456  
**Project:** Indianapolis IN

## QC BATCH REPORT

Batch ID: 62653      Instrument ID **GC14**      Method: **SW8082**

MBLK		Sample ID: <b>PBLKS1-62653-62653</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>9/11/2014 10:03 PM</b>			
Client ID:		Run ID: <b>GC14_140911A</b>			SeqNo: <b>2934651</b>		Prep Date: <b>9/11/2014</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	U	33								
Aroclor 1221	U	33								
Aroclor 1232	U	33								
Aroclor 1242	U	33								
Aroclor 1248	U	33								
Aroclor 1254	U	33								
Aroclor 1260	U	33								
Aroclor 1262	U	33								
Aroclor 1268	U	33								
PCBs, Total	U	0								
<i>Surr: Decachlorobiphenyl</i>	178.5	0	166	0	108	50-130	0			
<i>Surr: Tetrachloro-m-xylene</i>	168	0	166	0	101	45-124	0			

LCS		Sample ID: <b>PLCSS1-62653-62653</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>9/11/2014 10:20 PM</b>			
Client ID:		Run ID: <b>GC14_140911A</b>			SeqNo: <b>2934652</b>		Prep Date: <b>9/11/2014</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	1822	33	1666	0	109	50-130	0			
Aroclor 1260	1760	33	1666	0	106	50-130	0			
<i>Surr: Decachlorobiphenyl</i>	175.8	0	166	0	106	50-130	0			
<i>Surr: Tetrachloro-m-xylene</i>	166.3	0	166	0	100	45-124	0			

The following samples were analyzed in this batch:

1409456-03A      1409456-04A      1409456-05A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** ENVIRON International Corp.  
**Work Order:** 1409456  
**Project:** Indianapolis IN

## QC BATCH REPORT

Batch ID: **62759**      Instrument ID **GC14**      Method: **SW8082**

MBLK		Sample ID: <b>PBLKO1-62759-62759</b>			Units: <b>mg/Kg</b>		Analysis Date: <b>9/11/2014 10:37 PM</b>			
Client ID:		Run ID: <b>GC14_140911A</b>			SeqNo: <b>2934653</b>		Prep Date: <b>9/11/2014</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	U	1.0								
Aroclor 1221	U	1.0								
Aroclor 1232	U	1.0								
Aroclor 1242	U	1.0								
Aroclor 1248	U	1.0								
Aroclor 1254	U	1.0								
Aroclor 1260	U	1.0								
Aroclor 1262	U	1.0								
Aroclor 1268	U	1.0								
PCBs, Total	U	1.0								
<i>Surr: Decachlorobiphenyl</i>	1201	0	1000	0	120	50-130	0			
<i>Surr: Tetrachloro-m-xylene</i>	1070	0	1000	0	107	40-110	0			

LCS		Sample ID: <b>PLCSO1-62759-62759</b>			Units: <b>mg/Kg</b>		Analysis Date: <b>9/11/2014 10:54 PM</b>			
Client ID:		Run ID: <b>GC14_140911A</b>			SeqNo: <b>2934654</b>		Prep Date: <b>9/11/2014</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	42920	1.0	50000	0	85.8	50-130	0			E
Aroclor 1260	43670	1.0	50000	0	87.3	50-130	0			E
<i>Surr: Decachlorobiphenyl</i>	966.1	0	1000	0	96.6	50-130	0			
<i>Surr: Tetrachloro-m-xylene</i>	943.6	0	1000	0	94.4	40-110	0			

The following samples were analyzed in this batch:

1409456-02A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.